The Journal
OF THE
Jamaica Agricultural Society.

The more people do the more they can do; he who does nothing renders himself incapable of doing anything; while we are executing one work we are preparing ourselves for undertaking another.

VOL. XXI. DECEMBER, 1917. No. 12.

BOARD OF MANAGEMENT.

The usual monthly meeting of the Board of Management of the Jamaica Agricultural Society was held at the office of the Society, 11 North Parade, Kingston, on Thursday, the 15th November, 1917, at 11.30 a.m. Present—Hon. P. C. Cork, C.M.G., Hons. D. Campbell and S. S. Stedman; Messrs. R. Craig, A. W. Douet, J. Dougall, A. W. Farquharson, A. C. L. Martin, E. E. Melville, E. W. Muirhead, Conrad Watson, Rev. W. T. Graham and the Secretary, Jno. Barclay.

Mr. Craig was voted to the Chair until Mr. Cork arrived who, as Vice-President, presided.

Apologies for Absence.—Hon. R. P. Simmonds, Messrs. R. F. Williams and H. Q. Levy.

Confirmation of Minutes.—The Secretary said that the Minutes of the previous meeting had been rather late in the Press and did not go out as usual with the Agenda. Each member, however, had had a copy prior to the meeting. There were no alterations except in errors of type. The Minutes were confirmed.

Statement of Accounts.—The usual monthly Statement of Accounts was passed round.

Matters arising out of the Minutes.—The following matters arising out of the previous Minutes were considered:—

(*a*) *Cable Quotations.*—The following letter from the C.S.O. was read:—

No. 15643-20046. 20th October, 1917.

"With reference to your letter C.S.O. 57, dated the 25th ultimo, relative to the inclusion of the market price of logwood in the Market Reports furnished to the newspapers by the Direct West India Cable Company, Limited, and the revision of quotations, I am directed by the Acting Governor to transmit for the information of the Board of Management of your Society a copy of a letter from the Superintendent of the Cable Company to whom a copy of your letter under reply was forwarded."

(Sgd.) H. R. LATREILLE,
For Acting Colonial Secretary

October 10th, 1917.

The Hon. Actg. Colonial Secretary,
Kingston.

"In reply to your letter No. 14787/18912, dated the 3rd instant, and in continuation of my letter No. 28/235, dated the 6th instant, I have to transmit the following reply just to hand from our General Superintendent in Halifax, N.S.:—

1. In respect to Market Prices, the list as now embodied in our daily bulletin, and published in the newspapers, is one that has been approved by the Hon. Colonial Secretary and augmented from time to time under conditions laid down in Clause 19 of Law 16 of 1898, wherein the Company is to supply not less than 400 words per diem including the market reports referred to. It will be acknowledged that very good measure is being given in this respect.

We shall however be pleased, with your approval, to act on this suggestion of the Board of Management of the Agricultural Society, and take the necessary steps towards obtaining if possible, and including in the Daily Market Reports, the ruling price of Logwood on the New York market which we presume is what is required.

2. The question raised with reference to revision of the quotations is receiving careful attention. It is our desire to bring these to Jamaica at all times in a form that will satisfy everybody."

I have the honour to be,
Sir,
Your obedient servant,
(Sgd.) A. INNES POCOCK,
Acting Superintendent

Mr. Stedman asked why coconuts should not be included in these quotations both for Canada and England, and the Board decided to suggest this to the Government.

(*b*) *Lack of Land.*—The Secretary said that with reference to the lands which the Surveyor General had opened up at Content in St. Elizabeth for rental to settlers, that Messrs. Martin and Muirhead who had been deputed to visit these lands, had reported as follows:

"Mr. E. W. Muirhead and myself whom you appointed to report on the lands on the border of Manchester and St. Elizabeth, which the Government are disposed to sell or rent to settlers who have represented that they are unable to get lands for cultivation purposes, visited the districts on Monday, the 22nd ultimo (October) and beg to report as follows:—

"We were accompanied by Mr. Lynch, the Agricultural Instructor for theses districts, who showed us over the several lots, which he informed us consisted of about 50 acres more or less, in about eight different lots varying in sizes from one and a half to eighteen acres in detached pieces.

"The land is generally poor and worn out, not at all suitable for cultivation, nor is same likely to be remunerative to any one cultivating same, nor do we think it is at all likely to attract any one desirous of cultivating, and will not in any way satisfy the demands being made.

"It might be possible, however, to obtain purchase for same or rental from the holders of adjoining lands, at a nominal sum, as they alone might be able to utilise them to some advantage, which is the most if anything that can be done with these lands.

"We certainly do think, that if this is the class of lands that is likely to be offered in the demand for increased holdings, that time would be wasted in going to inspect them as it is impossible to expect anyone to be able to cultivate and work same to any advantage to themselves."

(Sgd.) A. C. L. MARTIN.
E. W. MUIRHEAD.

Mr. Martin, in speaking on the subject, strongly impressed the fact that land was urgently needed needed in certain localities, and suggested that the Government should acquire any available properties in such localities, to be sold at reasonable terms, as Crown Lands.

The Chairman referred to the fact that the sale of lands of such a type as had been offered was not wise when the land was reported as useless. If the Government advertised that land was being sold at five shillings per acre, it would surely be purchased, and subsequently the buyers would discover that it was useless for cultivation. The Government had propounded a scheme some time ago, offering to exchange useless lands for good lands in other localities, but he (the Chairman) could not recollect what had happened to this scheme.

The members present agreed that they had never heard of such a scheme, and that the Secretary should be instructed to write to the Government, asking if that scheme were in operation, and the terms that were offered to small owners.

Mr. Martin said that he understood that a gentleman had approached the Government offering to rent some of those lands near the Government Farm at Lititz, with a view to growing Sisal. They had agreed to let him have the land at 10/- per acre, and he had begun

to prepare for planting, but he understood that this gentleman was now told that the St. Elizabeth Land Board had decided that he must pay £1 per acre for the land, which in the opinion of most people who knew the place, was only valued at about 5/- per acre. The result was that the gentleman had given up the idea, and sought lands elsewhere. He should have thought that the Government would have jumped at an offer by a responsible party to grow sisal in that locality, and it might even have been wise to have given the land for nothing in order to get the land utilized and the co-operation of a a large planter in this industry.

Mr. Craig said that the proposed venture to which Mr. Martin referred had come before the Instructors' Committee, as Major Knowles had applied for the assistance of one of their Instrcutors, which had been granted readily, as it was thought that a cultivation of sisal established in the district would be generally useful. He wanted to know whether it would be worth while appointing a Committee to go into the subject of lands generally.

The Secretary said that there were other matters to be considered in the same connection. He had a Resolution from the Southfield Branch on the subject of lands now being surveyed in that part of St. Elizabeth, which was as follows:—

1. "That the Government Surveyor is now surveying lands in the surrounding districts.

2. That the said Surveyor is charging the sum of 16/- per annum per acre for any portion of land in excess of the taxed portions.

3. That in cases of lands possessed by persons of advanced years the Surveyor does not give them the option of retaining the land, but rents them to others.

4. That no fruit, lumber, etc., found on the rented land is to be taken therefrom.

Be it resolved that representations be made to the Government through the Board of Management of the Jamaica Agricultural Society:

That this Society is perfectly in accord with the Government taking over lands not covered by taxation, but that much hardship is created by taking away the lands from those who hold them and passing them over to others.

That no land in these parts is worth 16/- per acre per annum as rental, and in the opinion of this Society a fair charge as rent could be fixed at 5/- per acre per annum.

That with a congested population the interest of the people would be better served by selling only the unclaimed portions which the present holders are not in a position to rent or purchase.

That no higher price than £1 per acre be charged for the lands to be sold considering that its only by heavy mulching and the application of manure can crops be successfully grown in these dry areas.

That a copy of this resolution be forwarded to the Secretary of the Jamaica Agricultural Society to be placed before the Board of Management at its next meeting with the view of getting the Government to act promptly in the matter and so relieve the present suffering and anxiety of the people."

(Sgd.) E. J. SMITH, President.

The Secretary was instructed to forward the Resolution from the Southfield Branch to the Surveyor General. He was also directed to forward to the Government the report of the Committee on the lands at Content and at the same time to ask the Government what had happened to the scheme for the exchange of lands.

(c) *Loan Banks.*—The Secretary presented a letter he had received from the Chairman of the Loan Banks as follows:—

492-17. 25th October, 1917.

"With reference to your letter of the 19th inst., it appears that there is much dubiety as to the functions and powers of Loan Banks. In order to remove misconceptions which exist among your Board of Management, I will shortly describe them.

With two exceptions, the Banks are called People's Co-operative Bank, Ltd., the two exceptions alone including the word "Agricultural." Their rules (page 1) set out that their object is to "carry on the business of banker and bill discounter, and to make advances for co-operative, agricultural and industrial objects." As to membership, any person with certain qualifications as to place of residence and age, shall be "eligible as a member" (page 1); and "any member" (page 2) when above 21 years of age, "shall be entitled to obtain loans."

The rules in general use are those used by the Christiana Bank, recommended by Mr. J. T. Palache, one of your Instructors, with at least the tacit approval of your Board, compiled before the Agricultural Loan Societies Board was appointed and accepted by them in the light of their previous history, at a time when the delay involved in drafting new rules would have aggravated the unavoidable delay in making loans after the hurricane and drought of 1912.

The second paragraph of your letter under reply is quite correct. With regard to the last paragraph, most of the members of the Banks are agriculturists solely, and some in addition to other occupations, and therefore it is reasonable to state that agriculturists get most of the money loaned. This from the Bank's own fund be it remembered.

With regard to Government moneys, these have been loaned under Law 6 of 1912 and under the Special Loans Laws 1912 and 1916. The former moneys are dealt with in precisely the same manner as the Bank's fund, that is, they may be loaned on acceptance or mortgage, as the management of the banks may decide to be the most suitable. In connection with the recent hurricane, it has been represented by one Bank already indebted to the Board under the Special Laws that a loan under Law 6 of 1912 would require a smaller sum, and be more easily manipulated and so suit their present requirements better, as the money could be turned over, which Special Loans money cannot be. My opinion is that these Law 6 moneys have all been applied to agricultural purposes.

With regard to special loans, the receipts and securities of the individual borrowers are lodged in this office, and the mortgages are recorded or registered as the case may be. The statement that such moneys are not applied for the purpose for which they are lent is demonstrably incorrect. Of course where a large number of small loans is made, the expectation that every penny will be properly applied is Utopian, but practically speaking, such moneys have been used in the resuscitation of cultivations, as reports from Inspectors now in this office show. The Secretary of the Board stated in a recent report to me that the interest in the Banks of the larger men is mainly confined to destructive criticism. This is too true, and what I would like to receive is constructive criticism, and particularly specific cases of misapplication of moneys loaned by the Board, instead of statements as to "many cases."

In view of the second paragraph of this letter, you will see that the statement in the first paragraph of Mr. Cork's letter is hardly correct.

But I am in thorough accord with the second paragraph of Mr. Cork's letter. The policy of your Board of Management first to advocate the establishment of Loan Banks, and then when they were established to order your Instructors to have nothing to do with them, passes my understanding.

"I offer my opinion for what it is worth, but for your Society to handle the producing end of agriculture, and not the selling end, using the Loan Banks as a means of obtaining capital, is an anomaly, rightly described (though perhaps a narrower conception) by Mr. Cork as "missing one of the best opportunities for doing good to the peasant proprietors." Much hard work and missionary effort would be rqquired, but it would be worth while.

"After a short experience of the working of the Banks under their present constitution, I came to the conclusion and so informed the Government, that their rules require adapting to local conditions; but that any alteration should be postponed till their Government loans were repaid. Given ordinarily favourable conditions, I am confident that the Banks would have repaid their loans by the end of 1915."

(Sgd.) C. C. Anderson,
Chairman,

The Secretary also read a leter from Hon. H. Cork as follows:—

27th October, 1917.

"I am obliged for your letter of the 19th instant. I have brought to the notice of the Chairman of the Loan Board the special case which induced me to take up the question of the impropriety of Agricultural Loan Banks discounting accommodation papers instead of reserving their resources soley for agricultural loans, and my object in approaching the Agricultural Society was merely to advocate that they

should associate themselves as far as practicable with the Loan Board in furthering the interests of these Banks and in keeping them within proper bounds.

"I do not propose to report to the Society such particulars as I have done to the Loan Board.

"The instances you mention of loans to purchase live stock and machinery are, of course, perfectly legitimate operations, provided they are intended for agricultural operations, the preparation or curing of crops or for stock breeding purposes.

"But I should like to feel assured that instead of holding aloof, the Agricultura Society is assisting and identifying itself with the Loan Board in the furtherance of the legitimate operations of the Agricultural Loan Banks."

(Sgd.) HY. CORK.

The Secretary said that it was not correct to say that the Society kept aloof from the Loan Banks. The Instructors' Committee after careful consideration in the past, had decided that it would not be judicious for the Instructors to have any official connection with these Loan Banks, but that they should still, unofficially, give all the help, guidance and hints they could. This policy laid down by the Committee had worked well and had probably been of greater use to the local Committees than direct connection; the Instructors had been kept free from any local financial squabbles. It would not be desirable even now to depart from the ruling in this connection.

The Chairman said he adhered to his opinion previously expressed that Agricultural Loan Banks should not discount papers except for agricultural purposes.

Mr. Stedman said that "Agricultural" Loan Banks was at present a misnomer. He thought that the powers of these Loan Banks were far too wide and there was an increasing danger in this.

It was decided to reply to Mr. Anderson's and Mr. Cork's letters stating that the Board was satisfied with the policy which they had adopted in respect of the relationship between the Instructors and the Loan Banks.

(*d*) *Rice Industry.*—Mr. Muirhead said that he had written the Secretary on the subject of the Rice Industry, as he felt that the time had come when something should be done to foster an industry of the kind. They had all read various hints published at different times asking that this industry be fostered in some way, and he wanted the Board to take the matter up with the Government.

After discussion, it was decided that the Government should be written to, asking that the Department of Agriculture be requested to enquire into the status of the Industry and to report on it.

(*e*) *Embargo on Coffee and Cocoa.*—(1) The Secretary read the following letter from the Secretary of the West India Committee as follows:—

October 9th, 1917.

"We beg to enclose a copy of a letter which we have addressed to the Secretary of State for the Colonies with regard to the importation of British West Indian Cocoa into this country, and I shall be obliged if you will kindly bring it before the notice of the members of your Society who are interested in the Cocoa Industry.

I may mention that we have also laid our views on this subject before the Colonial Office in deputation following a meeting of the newly formed Cocoa Section of the West India Committee, for particulars of which I would refer you to the West India Committee Circular.

It will be noted that in our letter we refer specifically to Trinidad and Grenada the reason being that we received representations from these Colonies. It is, however, quite understood that any modifications which may be made in the Import Restrictions Order will affect the British West Indies generally.

(Sgd.) ALGERNON E. ASPINALL,
Secretary

Copy of letter addressed to the Secretary of State for the Colonies by the West India **Committee:—**

5th October, 1917.

"We beg to bring to your notice the following points with regard to the regulations restricting the import of Cocoa into this country, with special reference to their effect on the British West Indies.

2. Under the present regulations, which came into force on the 23rd February, 1917, 50% of the shipments made to this country in 1916-17 were allowed to be shipped to this market under license from the Colonial Governors; and as matters now stand after such 50% has been shipped no further license can be granted until the 23rd February, 1918.

3. The crops in Trinidad and Grenada begin in the autumn and, in the case of Grenada in particular, the larger part of the crop has in the past been shipped before the end of February.

4. The greatest demand for freight from the West Indies occurs between March and June when, in addition to other produce, the sugar crops from Trinidad and Barbados are ready for shipment, whereas, the heaviest demand for freight from this country to the West Indies is towards the end of the year, and the vessels carrying such goods have been accustomed to bring home large consignments of Cocoa.

5. Under the terms of Priority—Cargo list No. 7 of 21st July, 1917—West Indies to United Kingdom—1,000 tons of Cocoa are allowed to be shipped per month; but under the existing regulations no licenses for export can be obtained.

6. We would venture to suggest that if the regulations could be altered so that shipments were allowed, say, after 1st January, 1918, such date would not only coincide more closely with the crop period and avoid to some extent the difficulties of storage and consequent depreciation; but that such alterations of date would, subject of course to the arrangements of the Shipping Controller, be found more convenient from the point of view of providing freight.

7. In conclusion we beg to state that we have submitted this letter to the Association of West Africa Merchants, and have received their reply saying that they see no objection thereto.

(2) The following letter from the C.S.O. was also read:—

No. 16804-22486. 12th November, 1917.

"With reference to the correspondence ending with your letter C.S.O., No. 79, dated the 22nd ulto. on the subject of the restriction on the importation of Coffee and Cocoa into the United Kingdom, I am directed to forward herewith for your information and guidance a copy of a telegram which has been received by the Acting Governor from the Secretary of State for the Colonies.

I am to say that His Excellency will be obliged if you will be so good as to inform Mr. R. S. Gamble at once of the terms of this telegram."

(Sgd.) D. H. Hall,
Acting Assistant Colonial Secretary.

Copy of telegram received from the Secretary of State for the Colonies:—

With reference to your telegram 24th October, Board of Trade inform me that licenses will be issued for importation of 135 tons Coffee by steamer *Quillota* (.) With regard to Cocoa, decision will be communicated as soon as possible.

(Sgd.) Long.

The Secretary said that publication had been given in the Press to the terms of this telegram. This represented roughly, about, 1,500 bags, but there were fully 20,000 bags of Coffee in the Island.

Mr. Stedman said he understood that certain vessels leaving here were taking logwood and pimento, which would not be shipped if coffee and cocoa could be. The banana industry had been wiped out, and the people were depending on the coffee and cocoa they could ship to meet their expenses. The Government were not waiting on the people for their taxes. Was it right under the circumstances, to keep back the shipping of products which they were depending on for subsistence at this juncture? He believed that if the matter was put to the Home Authorities in the true light, the present situation would be materially altered.

It was not a matter of tonnage not being available. There were

begging for freight to fill up. There were vessels which had loaded coffee in Central America for the mother country and yet a prohibition had been placed on coffee going from Jamaica. He thought something was wrong somewhere. It was rather strange that people outside the Empire were able to get in their products to the mother country, whilst they, who formed a part of the Empire, and were making every sacrifice in connection with the war, were shut out. There was a good deal of discontent here over the matter, and he thought that the local Government should represent the matter in its true light, for there was certainly something wrong somewhere. He was sure that if the people at home knew what was happening there would be some change.

The Secretary read a letter which he had received from Mr. J. W. Hill of Messrs. Rowntree and Co., Ltd., dated 14th November, 1917, in which he said he could arrange for space to remove his cocoa which he had stored if the embargo were lifted, and saying that the Government's attention should be drawn to the fact that sufficient space was available on steamers leaving here, to remove all the cocoa in the Island.

The Secretary was instructed to forward to the C.S.O. the points that had been brought up in the discussion and to make public as soon as possible any information he might receive in this matter.

(*f*) *Cotton Industry*.—The Secretary said that as directed, he had forwarded a copy of the letter from the C.S.O. with enclosure from the Empire Cotton Growing Committee to Mr. Watson, and he had replied as follows:—

8th November, 1917.

"The question of the Empire Cotton-growing Committee which you have referred to me can better be answered by some Government Department which is in a position to furnish, or obtain the details asked for and also to state the attitude of the Government with respect to fostering the cotton industry in Jamaica.

"I attach a summary of the matter which gives in a general way most of the information required."

(Sgd.) C. WATSON.

* * * * *

The primary factors in cotton cultivation are:—soil, climate and labour.

(1) Soil.—There are thousands of acres of land in Jamaica suitable for growing cotton but the best and most available lands are already in bananas or cane which products give a more profitable return than cotton.

(2) Climate.—The cotton plant thrives best with a moderate and well distributed rainfall.

"The rainfall in Jamaica is uncertain and not well distributed, but although conditions are not ideal, cotton has been and can be successfully and profitably grown and continued selection of seed would probably adapt the plant to its environments.

(3) Labour.—This is a difficult problem, being scarce, unreliable and inefficient "The revival of the sugar industry and the consequent increased demand for labour, makes it improbable that there will be any extension of cotton cultivation in Jamaica.

After discussion it was settled to forward this matter to the Government with Mr. Watson's suggestions, and to say that this Board thought that the Department of Agriculture could better furnish the information required by the Empire Cotton Growing Committee.

Instructors' Committee.—Instructors Reports and Itineraries.—The Instructors' Reports and Itineraries for the month of October were presented and referred to the Instructors' Committee as usual.

Live Stock Committee. Report *re* Contagious Diseases Animals Law.—The Secretary said that as previously instructed he had re-circulated to the Live Stock Committee the question of burning of carcasses along with the matter of butchery of young female stock, and the subject of Butcher's License; he had now received these papers back, and read some of the comments.

After some discussion it was decided to forward these papers to the Government and to ask that His Excellency receive a small Committee of this Board as early as possible, to go into these questions; the following Committee was appointed: Messrs. Craig, Dovet, Martin and Roxburgh.

Hurricane Reports.—The Secretary reported that he had received a grant from the Government of £830 for distribution of seed in the hurricane stricken areas, the odd £30 being for prizes for the Cottage Holdings Competition in Portland. He also said that Mr. Cradwick had recommended that a Cottage Holdings Competition similar to the one to be held in Portland, might be started in St. Thomas.

The Board decided that if there was any money available from the grant after the seeds had been distributed, they should ask the Governor's permission to use £30 for a Cottage Prize Holdings Competition in St. Thomas.

The Secretary then presented his Report on what had been done in the distribution of seeds. He said that there had been great difficulty in getting enough seeds promptly to satisfy the requirements, and it was judicious to hold some reserve, as last year, in case of failure of planting from any cause.

He had also to provide about £60 of seeds for Grand Cayman which he had not reckoned on.

Instructor for Grand Cayman.—The Secretary reported that it had been decided at the last meeting in reply to a request from the Government for an Agricultural Instructor to go to Grand Cayman to recommend that Mr. Briscoe be sent. He had written the Government as directed and their reply was as follows:—

No. 15922-20729. 26th October, 1917.

"I am directed by the Acting Governor to acknowledge the receipt of your letter C.S.O., No. 76, dated the 19th inst., and to say that His Excellency approves of Mr. J. Briscoe, Agricultural Instructor for the West Central District, being sent down to Grand Cayman with a supply of seeds and plants for a stay in the Dependency of from six to eight weeks, and to ask that you will be so good as to convey to the members of your Board of Management an expression of His Excellency's thanks for their ready compliance with his wishes in the matter.

2. With reference to the second paragraph of your letter, I am to ask that you will report as soon as possible what amount will be required for the purchase of the seeds and plants, and to enquire when Mr. Briscoe will be ready to leave."

(Sgd.) G. M. Wortley,
Acting Colonial Secretary.

The Secretary said that he had made the arrangements, and Mr. Briscoe had left on the 13th November with a supply of seeds.

Sweet Potato Slips.—Letter from the C.S.O. *re* Sweet potato slips, No. 15226-19872 dated the 12th ultimo was read at the last meeting, but not dealt with.

The Secretary said that he had been able to arrange for supplies of sweet potato slips from the Prison Farm free, and had only to pay the Railway carriage. Most districts had potato slips and he had been able with a little organization to supply many requirements from their immediate localities.

Construction of Buildings.—The Secretary presented a letter from the C.S.O. as follows:—

No. 16072-19510. 29th October, 1917.

"With reference to previous correspondence on the subject of the recent hurricane, I am directed by the Acting Governor to forward to you 10 copies of the Supplement to the Jamaica Gazette, No. 27, which was issued on the 20th December, 1912, containing a Memorandum on the "Construction of School Buildings with a view to enabling them better to resist the force of the wind," together with 100 copies of the leaflet on "Improvements in the construction of peasants' houses with framing of rough round poles."

2. I am to say that 25 copies each of the Supplement and 1,000 copies each of the leaflet have been forwarded to the Parochial Boards of Portland and St. Thomas for distribution."

(Sgd.) G. M. WORTLEY,
Acting Colonial Secretary.

Lumber on Crown Lands.—In reply to the request of several Branches in Portland and St. Thomas *re* the use of Crown Land lumber, the Board had decided at the last meeting to write the C. S. O. Their reply was read as follows:—

No. 15908-20730 25th October, 1917.

"I am directed by the Acting Governor to acknowledge the receipt of your letter dated the 19th instant, and to inform you in reply that His Excellency has approved of the sale by the Surveyor-General's Department of lumber and shingles from Crown lands in Portland and St. Thomas, and that the necessary instructions have been issued to the Surveyor-General to work out, without delay, the details of a scheme under which his Department will effect sales, and in this manner also provide work for the people of those Parishes.

"I am to add that the Secretary to the Board of Supervision will assist in this matter, in connection with the matter of the restoration of houses.

(Sgd.) G. M. WORTLEY,
Actg, Colonial Secretary.

The Secretary was instructed to advise those interested in this matter.

Leaflets, Etc.—The Secretary presented a letter from the C.S.O., 15859-20728, dated 25th October, 1917, acknowledging receipt of the leaflets which the Society had prepared and issued after the hurricane.

Supply of Coconut Plants.—The Secretary said he had communicated with the Government with regard to Mr. Cradwick's suggestion that seed nuts might be set down both at Bath and at Hartford Gardens instead of using these Nurseries for cocoa for the time being. Mr. Cradwick had said that unless small settlers were encouraged there would be no re-planting of coconuts for some time to replace the trees that had been destroyed by the hurricane. He (the Secretary) had not yet got a reply from the Government. The Board instructed the Secretary to remind the C.S.O. of his former communication, and to ask that steps be taken early to carry this into effect as the matter was one of urgency.

Castor Oil.—The Secretary presented the following letter from the C.S.O.:—

No. 15827/20419/17. 24th October, 1917.

"I am directed by the Acting Governor to transmit for the information of your Society the accompanying copy of a translation of a letter which has been received from the French Consul at Port of Spain and its enclosure, in regard to the utility of the Castor-Oil plant.

(Sgd.) G. M. WORTLEY,
Acting Colonial Secretary.

The Secretary was instructed to publish the matter in the Newspapers and in the JOURNAL as being of general interest. (See page 512)

Food (War) Committee.—The Secretary read the following letter:—

6th October, 1917.

"I send you herewith, at the request of the Food (War) Committee, a memorandum upon the suggestions contained in your letter of April 23rd, 1917.

If you can see your way to send the samples of potato flour, I hope you will realise that we will be glad to pay all costs involved on this side.

May I personally thank you and your Committee for all the trouble you have taken and for your valuable suggestions?"

(*Sgd.*) W. B. HARDY.

Produce Protection Law.—The Secretary said that the papers in connection with this Produce Protection Law had been referred to a special committee. As a rule such matters were considered by the Staple and Minor Products Committee, and he had inadverdently summoned that committee to meet the previous day; the result was that certain members who attended the meeting had not seen the papers previously. He would try to get the meeting of the special committee at an early date.

Mr. Stedman suggested that as there might be many legal points, Mr. Farquharson might be added to that committee, and this was agreed to.

Letter from Mr. Esson.—The Secretary read the following extract from a letter from Mr. Esson:—

At your next meeting of the Board of Management please put before the members the need for the appointment of a Food Controller or someone to find out at once the condition of things as they exist at the present time.

The Board decided that it was not within the scope of the Agricultural Society to deal with this matter, and that as a matter of fact the Governor had already decided not to appoint a Food Controller and the Secretary was instructed to advise Mr. Esson to this effect.

Competitions.—The Secretary stated that Mr. Rennie said that there was a keen interest being taken in the Corn Competition and that the member for the parish had written to him in connection with that competition. There was a grant for £10 from the funds of the defunct Trelawny Branch to which the Hon. Mr. Ewen had added £1, and he was most anxious to get the competition started at once.

There were also other local competitions, e.g., the competitions in Clarendon—not less than 11 as reported in the October JOURNAL. Besides that there was a corn competition in Mr. Briscoe's district at Lambs River, and Mr. Briscoe reported that he had inspected 28 of the plots before his departure for Grand Cayman and they were very satisfactory.

Show at Turks Island.—The Secretary said he had received a letter from the C.S.O., No. 16559-21445/17, dated 7th November, 1917, transmitting copy of a letter from the Commissioner of the Turks and Caicos Islands. The Secretary stated that he had, at the request of the Governor, criticized the prize list of their last show, and offered them suggestions for improvement in subsequent shows and this letter from the Commissioner now submitted said that they had decided to hold a show much more ambitious in proportion than the last one. The Secretary said that he had also received a letter from the Commissioner who is also the Honorary Secretary of the Turks and Caicos Islands Branch, sending a copy of the last quarter's report, and an announcement of the show to be held in 1918.

Authorized Persons: Return of Arrests.—The Secretary presented the usual Return of Arrests from the Inspector General and was directed to publish them as usual.

Letter from Vere Branch.—The Secretary presented the following etter:—

29th October, 1917.

Will you try to get a slight change in Section 3 of Law 37, 1888, The Cane Mill Law?

"No person shall employ by Law or otherwise any boy or girl under 16 years in or about the feeding or working of a Sugar Mill."

I am writing from memory, and therefore might not be strictly accurate. For 16 years, I suggest 14 years. The reason is obvious. Children leave school at 14 years now."

(Sgd.) ARNOLD L. NEITA.

It was decided to leave this matter over until the next meeting, and meanwhile the Secretary was to invite discussion.

War Gifts. (*a*) *Re Duty on Sugar.*—The following letter was read:—

30th October, 1917.

"I have received your letter of the 5th inst., informing me that I am required by the British Government to pay (approximately) £32 (thirty-two pounds) duty on the two tons sugar, which you were good enough to ship for me as a gift to the British Prisoners of War in Germany, before the sugar can be forwarded to those heroic though unfortunte sufferers.

I purchased the sugar from the proceeds of the sale of my Jamaica Gift Book, which I compiled and published entirely for the benefit of the British Prisoners of War in Germany, and it was greatly due to sympathy for them that caused many generous-hearted persons to pay me more than the market value of the book.

I sent sugar as the shipping companies are patriotic enough to take War Gifts freight free, and I calculated that if the sugar went freight free and duty free, the poor fellows would get at least 100% more value in sugar than if I had sent the cash.

My feelings may better be imagined than described on being now told the British Government demands £32 (thirty-two pounds) duty on this sugar (which only cost forty-two pounds ten shillings and was carried freight free) before the Customs will clear it.

I shall be much obliged if you will request Mr. Aspinall to inform the British Authorities of the facts as set out in this letter and to say that I am not prepared to pay the duty and they must do what they think best with the sugar.

I have to thank you for all the trouble you have taken in the matter."

(Sgd.) EDITH CLARKE.

The Secretary said that it had seemed strange to him that without any notice of change, duty should now be charged on such war gifts which had been hitherto allowed free entrance. He was instructed to send the facts to the Governor and ask him whether anything could be done in the matter: also to ask for direct information as to the present regulations up to date.

(*b*) *Acknowledgments.*—The Secretary presented acknowledgments from the Rocky Point Battery and Fort Clarence of grapefruit which were the gift of Mr. Westmoreland, Mr. Hossack, Mr. Wigan and Mrs. Rerrie.

Applications for Affiliation.—Applications for affiliation were submitted from:—(i) Boston, (ii) Port Antonio, Portland. (iii) Craigton, St. Andrew.

Craigton had been a Sub-branch of Cambridge-Woodford Branch but having now far over the complement of members necessary to constitute a Branch applied for affiliation direct. The Instructors' Committee had recommended the affiliation of all these. Affiliations were granted.

New Members.—The following new members were elected:—Alfred LeBon, Cape Haitien, Haiti. Cains Sherison, Port-au-Prince, Haiti.

The meeting then adjourned until 20th December, 1917, at 11.30 a.m.

THE RICE TRADE OF THE WORLD.

The current number of the Bulletin of the Imperial Institute, just issued (London, John Murray), contains an article of 70 pages on the production and uses of rice. Practically all the rice-producing countries of the world are considered separately, in respect both of their rice crops and of their trade in rice, and an attempt is made to arrive at some idea of the world's production of this important foodstuff. It is calculated that the output of cleaned rice in 1916-17, in all countries except China, amounted to about 60,000,000 tons. Of this the British Empire produced about 36,000,000 tons, mostly in India, where the crop (including an allowance of a million tons for Native States) was no less than 35,000,000 tons. Of the foreign production of 24,000,000 tons, over 20,000,000 tons was grown in five countries—Japan, Netherlands, East Indies (chiefly Java), French Indo-China, Siam and Korea. Estimates of production, adopting the view that the output in China is not likely to be much inferior to the Indian crop and may exceed it, concludes that 40 per cent. or a little less, would be a fair allowance for India's proportion of the world's annual production of rice.

No less important is the position which India occupies in the world's rice trade as a source of supply for other countries. That is not a necessary consequence of its importance as a rice producer. Some of the countries of largest production—China, Japan, Netherlands East Indies—do not grow enough to supply their own needs, though in the case of Japan the large increase in the rice crops in the last three years has changed a heavy import balance into an export balance, so far as the trade with foreign countries (i.e., excluding Korea and Formosa) is concerned.

The world's export trade in rice is practically under the control of three countries, India, French Indo-China and Siam. It has been calculated that the quantity of rice which entered into international trade, as shown by the export returns of different countries, amounted in 1913 to about 6,400,000 tons. This includes exports from European countries of rice which has been milled in those countries, which came originally from India, Siam or Indo-China, and which unduly swells the total by being counted twice over. Even so, the original exports of rice from India amounted to 40 per cent of the total, while those from Indo-China were 20 per cent and those from Siam 18 per cent; in other words these three countries provided nearly four-fifths of the total.

India's export trade in rice is really dependent on Burma. Not only does Burma provide about three-fourths of the exports of rice from India as a whole (1,835,000 tons out of 2,420,000 tons in 1913-14), but Burma usually sends to other provinces of India more rice than those other provinces export. Without Burma, India would not be self-supporting in rice. As it is, India's exports of rice in the year before the war were equal to the gross requirements of the rest of the Empire, though actually only 42.6 per cent. of the exports went to British countries, and 57.4 per cent to foreign countries.

The exports direct to the United Kingdom were only between 6 and 7 per cent of the total. On the other hand, the United Kingdom imported considerable quantities of rice from Holland and Germany which had been first exported from India to those countries, and

after being milled and polished there had been re-exported to the United Kingdom.

Rice-milling, at one time a flourishing industry in the United Kingdom, had declined before the war owing to severe competition from the Dutch and German mills, with the result that not only was the British home market partly supplied by foreign milled rice, but what was at one time the considerable British export trade in fully-milled rice had been reduced in many directions. Since the war both the home and export trade in milled rice have been largely recovered by the British rice-millers, and it is hoped that this industry and trade may be retained after the war. The possibilities of the development of the complete milling of rice in India before export are also a matter for consideration.

The second part of the article deals with the uses of rice both as an article of food and for industrial purposes; the value of rice meal as a feeding stuff for livestock is also discussed. The milling processes are described, and the different grades of rice and the by-products which are obtained are shown in diagrammatic form. Numerous composition tables are given, and comparisons are afforded in this respect between rice and its by-products and other foodstuffs.

In connection with this subject it may be pointed out that the Indian Committee of the Imperial Institute is now conducting, at the request of the Secretary of State for India, an enquiry into the possibility of increasing the use of Indian raw materials and foodstuffs within the Empire. The enquiry naturally involves an investigation of the extent to which other countries, and especially enemy countries before the war, had secured a predominant share in Indian trade, and the causes which led to this condition.

A Special Committee has investigated the trade in rice, and it is understood has now almost completed its work. The need for such an enquiry is clear from the facts mentioned above regarding the dominant position taken in the rice trade by Germany nnd Holland, before the war, as compared with the United Kingdom.

November, 1917.

RICE GROWING.

The above notes on where rice is grown do not mention the United States which now grows an appreciable proportion of the world's rice. Last year over 40 million bushels were produced an increase of 12 millions over the previous year. By September last there was no rice left in the United States; while most had been used locally, a larger proportion than usual had been exported, to the tune of 533 per cent more. This includes a large quantity imported from the East through San Francisco.

In Jamaica about 11 to 12 lbs. of rice are consumed per head per annum, in Britain 30lbs. per head, in the United States only 6 or 7 lbs., a greater use being made of cornmeal there, while in Siam 523 lbs. per head is consumed which is almost incredible, only we must remember that rice there represents 90 per cent of the food eaten; in India the consumption is about 150 lbs. per head; Japan only slightly less.

The greatest extension of rice growing is taking place in California and fortunes are being made in the industry. Lands are being taken

up by immigrants chiefly Japanese and the acreage under rice extended from 16,000 in 1914 to 85,000 acres last year and is expected next year to reach 150,000. The average yield there is 3,500 lbs. of grain per acre.

The States of Louisiana, Texas and Arkansas produce 80% of the rice grown in the United States.

Rice as a Food.

In these days of high prices rice is selling at 4d. per lb. It only contains 12 per cent of moisture. Sweet potatoes at ¾d. to 1d. per lb. contain 75 per cent of moisture, Irish potatoes at 3d. per lb. contain 75 per cent of moisture also, and yams at 1d. to 1½d. per lb, the same. Reducing this to the basis of what solid food you get for one shilling rice is still a cheap food. Similar dry food like peas and beans contain only 10 to 15 per cent of water, and at 6d. a quart or 4d. per lb. with rice at 4d. a lb., are the cheapest and most nutritious combinations at the present time. Meat stuff as it is bought contains from 50 to 65 per cent of water.

So long as care is taken not to eat the white polished rice, this grain is one of the best foods the world produces. It is not only good for the nutrition it contains as per chemical analysis, but it is so easily digested that the human laboratory gets more out of it in a shorter period than any other food.

Rice Growing.

In reply to the query *re* work to be done on rice, with reference to the amount of labour employed, I beg to say that the industry requires a good deal of labour between April and July, and again in November and December. The preparation of the land in marshy places such as are suitable for the growth of this crop is a work that brings a higher scale of wages than canes or bananas. It is not a pleasant kind of work and requires some skill on the part of the labourer so that the much coveted 4/- a day is easily made by the hard workingman and even women can get wages very much above the average. There is constant activity from the beginning of April till the end of August. The men thus employed give their time to sugar estate work during crop time and so the rice industry is a complement to the sugar factories. A large extension of the rice industry will develop skilful men who will stick to it. It is not likely that native rice will ever be sold again at 7/- per 100 qts., a price which undersold imported rice very much. Even at 10/- during a good year, the profits are larger than that made on canes. I saw 8 sq.-chains of rice this year giving a gross income of £22 8s., and a nett of £16 which cannot be got on canes as sold by the farmers. The prices are now very high, but in normal times the profits would still be £10 an acre. So that from the point of view of a profitable investment the rice industry is one to be encouraged in the commercial interests of the island.

I sincerely hope that some effort will be made to adopt some scheme with a view of encouraging its extension.

R. C. Somerville.

THE RICE GROWER, MONTH BY MONTH.

By the time this article appears in the JOURNAL, the entire rice crop will have been reaped, dried and put away in bags and much of it will have been sold. The old rice fields too, that have dried up are smiling with the rich green foliage of the cow pea that many rice planters sow as a catch crop and to keep down the growth of grass, and this saves expense in cultivation. Where the water was deep and is only now drying up there is still time to get a famous crop of cow pease, black eye or quick increase before the next sowing time. This practice has been followed by the coolies for quite a long time and we must give them the credit for teaching the native peasant planter a useful lesson. He reaps enough to store up along with his rice and finds in the combination of these two a food that contains all the essentials of a perfect diet. The coolies are not responsible for the large quantity of peas imported into this country and the £2,000 paid for red pease grown in America is not contributed by them. They use split peas and dahl, but then if they could grow these here, they would do so.

The greatest care has been taken in the selection of beah, or seed rice ,by this time especially where the selection has been made from an old field. So that the intending planter has attended to the most important factor in the industry.

I must say something of the seed rice that the Agricultural Society will handle this year. From the start every attention has been given to details with a view of producing the best article. New lands have been prepared and planted as early as possible and although in such a case all the seeds are good for sowing, a careful selection has nevertheless been made, so that intending rice growers will get the best article possible.

New lands that are to be planted will require careful cultivation, that will remove stumps and vegetation as well as ensure a good tilth of the surface soil, so that a crop of peas of the cowpea tribe is a good investment. In my next article in the January JOURNAL, I shall deal with the preparation of soil and the establishment of water control.

R. C. SOMERVILLE.

NOTE.—The above refers to swamp rice. We did not stock enough seed last year to supply all whom the articles in the JOURNAL on Rice Growing stimulated to plant. We trust there will be even a greater demand next season and we hope to have a good stock of selected seed.

But it is also of the greatest interest that so much dry land or mountain rice has been grown and mostly strange to say in what is usually a dry district, the Liguanea Plains of St. Andrew, at the foot of the hills five to six miles out of Kingston. For two years good seasons have prevailed there. These rice fields when ripe and ready for harvest, at the beginning of November, formed a very pleasing sight. This dry land rice can be grown without the tediousness of transplanting and is planted similar to corn or guinea corn. We have also arranged to get a stock of this.—ED.

Learning to Eat Rice.

Boiled rice is digestible in one hour, which makes it an admirable food when ease of digestion is a matter of importance.

In comparison with wheat, rice lacks somewhat in nitrogenous, material and fat, but it is rich in carbohydrates, the and deficiency of albuminoids and fats can be supplied from legumes (peas and beans.)

Analyses show that 100 pounds of cleaned rice contains 87.7 pounds total nutrients. These consist of 8 pounds protein, 0.3 pounds fat, 79 pounds carbohydrates, and 0.4 pound ash. In comparison 100 pounds of wheat flour contains 87.1 pounds of total nutriments consisting of 10.8 pounds protein, 1.1 pounds fat, 74.8 pounds carbohydrates, and 0.4 pound ash.

In the rice-producing districts in California, millers and bakers are now urging the use of rice flour for bread. Rice flour contains 10.95 per cent protein, against 7.1 per cent in cleaned rice. It is claimed that rice flour makes a more tasty loaf and that rice bread will keep longer and in better condition than will wheat bread. When this flour is more fully known to the housewives of the country it will no doubt be in steady demand.

The comparison between rice and potatoes is even more striking. In a pound of rice there are 1,630 heat units. In a pound of potatoes there are only 310 heat units. One would be required to eat five and one-quarter pounds of potatoes or yams to obtain the same amount of energy as is contained in one pound of rice. Reduce this to a basis of economy, and rice at 4d. per lb. will be found better to accompany meat and than yams or potatoes, and should be on every table.

The Oriental custom of removing the hulls and bran with a pounder and using the grain without polishing is not only more economical, but also furnishes a rice of far higher food value than the rice of commerce.

But fashion demands rice having a fine gloss. To supply this the rice is put through the polishing or milling process, which removes some of the most nutritious portions of the rice grains.

Aside from the loss in flavour and nutritive value by polishing, fashion again increases the cost of commercial rice by demanding whole grains.

———:o:———

We take the following figures from the "Tropical Agriculturist." Of course production does not mean export. We presume Burmah, which grows most rice and supplies India is included in British India:—

The Normal Consumption of Rice by the Fourteen Principal Nations.

	lb. Per Capita		lb. Per Capita.
U.S.A.	5.31	Argentine	41.17
Norway	9.22	Italy	105.0
Sweden	9.31	Spain	104.60
Russia	11.16	Brazil	122.10
U.K.	27.0	Porto Rico	146.0
France	34.13	Japan	147.0
Germany	93.17	China	158.0

WORLD'S PRODUCTION OF RICE (CLEANED).

Year 1913.	Million lb.	Year 1913.	Million lb.
British India	64,490	Philippine Isles	1,512
Ceylon	356	Russia in Asia	513
China (3 Provinces)	47,204	Turkey	137
French Indo-China	5,900	Italy	739
Java and Madura	8,905	Spain	303
Japan	15,788	Egypt	505
Korea	3,051	Mexico	220
Formosa	1,610	Sao Paulo (Brazil)	110
Siam	6,218	Peru	109
Fed. Malay States	87	U.S.A.	715

:o:

CORN.

THE GREAT DRIVE.

The Germans have made themselves notorious (we shall not say famous) for the big drives they have made. While still holding their own in other parts they concentrated on one particular object, their special skill, their deepest cunning, extra masses of men and guns and let drive at their object with full force. Last year the full force of the Agricultural Society's organization, while still paying attention to all crops as usual, and special attention to food crops, concentrated on corn and made a drive to get corn grown by all and sundry to the largest extent possible. Corn was written of and talked of at every opportunity: the special need for planting plenty, the virtue of good seed, how to protect the seed for planting to prevent attacks of rats, mice and crickets; how to control pests, the thinning out of poor stalks before they tasseled, the selection of the best cobs for seed, how to store seed and ordinary corn also, and so on. It was made as easy as possible for every one to get good seed corn, although we could not supply a fourth of the demand for the selected seed corn. We also had and supplied the different stuffs to control pests in the field and the seed in store. Response would not have been so quickly brought about in one season, but for the fact that the high prices of foodstuffs made people, in addition to the usual growers, give an ear to the subject, and in the second place because the ground had been so long prepared, through our literature on the subject, giving the fullest information, methods, cost and results so that these could be quoted to enquirers.

Favoured with good seasons the crops were as a rule excellent and this cheered and stimulated everybody—growers, buyers, and consumers alike.

But a crop of 250,000 bushels although more than double Jamaica's usual summer crop, is nothing to what could be produced if only the large proprietor would respond as well as the small settler has done. Why should the burden of producing food fall on those with very limited lands? Of course a limited supply keeps the price up, but the up is too up: in these times we want plenty at a moderate price sufficient to be a paying price for the producer.

There can be no question of there ever being any slump in corn during war time. It is probable that cornmeal will have to make

up for the shortage of wheat flour; no other product can so readily supplement wheat. We feel strongly on this subject, that Jamaica should be overflowing with foodstuffs if the growing of these was properly organized. But so many only look to the other man to be up and doing. It is the bounden duty of every man with land in every district that will grow corn, to plant from one acre upwards. Pasture land should be broken up with fork, plough, or even hoe two to three months before planting in order that the turf can rot and the clods of earth be sweetened and refined by the sun, breeze and rain, so that the soil can form a seed bed with the most congenial conditons for corn and peas; the double crop should be grown wherever possible.

There is no time to be lost for preparation for the spring planting; the best season for planting may be taken as between the 15th March and 15th April as a general rule.

The situation of the world's food crops is not assuring. Scarcity of ships shuts off the more distant parts from sending in their supplies to the great centres of consumption which it is vital to feed—Great Britain, France and Italy especially. Australia has great stocks of wheat and butter; Java has sugar—but these cannot be sent to Europe from the Antipodes. Jamaica by feeding herself as far as possible, would thus save tonnage for other necessities. It must be realized that everyone should and can help in this. There are many, many thousand acres of good land in Jamaica not utilized for tillage, and though in ordinary times these could not be made to pay either in any of our ordinary export crops or products consumed here, bush land and pasture land can now pay under food crops and the most important is corn and next peas and beans; both can be taken as six month crops.

Jamaica should by next August and September look to produce one million bushels of corn, and it can be done! Supposing every proprietor put in from 10 to 50 acres of corn and peas. We know the difficulties of fencing off at the price of fence wire is a very serious one. But cannot these be surmounted by throwing up one whole pasture planting out so much and giving the rest out even at pepper corn rent to others to grow corn and peas. There is another difficulty—not applicable to corn so much but to a large production of Black Eye or Cowpeas—the difficulty of storage and marketing. This is a matter for Government co-ordination.

The great drive that the Agricultural Society desires to make and is preparing for, is the great corn drive of next spring.

* * * * *

There are 2,692,587 acres of land in Jamaica, deducting what is rocky, forested, high mountain top and at present under cultivation, it would be possible to find 50,000 acres of land not at present utilized which is suitable for growing corn without hardship to anyone. Allowing only for 20 bushels per acre, this would yield one million bushels. Would the labour for growing be available? That we cannot answer for, but co-operation in the use of ploughs and plough stock could work wonders. How many ploughs lie idle after one owner has used his plough. Could not arrangements be made to pass round ploughs and plough stock in districts? Is such co-operation and co-ordination impossible?

SELECTION OF SEED CORN.

By the time this is read it will be near the time for growers to go through their fields and select the best plants and the best cobs there for seed. Sometimes there are particularly rich spots in the field such as where a heap of wood has been burned, where the corn stalks have grown very luxuriant and may have two or three good cobs, but it is better to take the exceptionally good stalks and good cobs grown under the ordinary conditions of the field. These are the results of superior vitality. No one however, will ever secure a good standard of seed corn that will breed true unless he has gone through his field and cut out all the poor stalks before they tassel as otherwise the best plants may have been fertilized by the very poorest so that although the corn has been borne on a fine stalk and is a fine cob, the germ or embryo having been fertilized from the pollen borne on a miserably poor stalk, the seed will not grow and bear corn of the best quality. It is like having a very fine mare or cow or sow or she-goat, served by a runt of a male.

:o:

THE STRUCTURE OF A CORN GRAIN.

In the making of cornmeal such as is imported the tip cap, the hull, the germ and part of the horny endosperm are taken out. The germ contains fat, and from this corn oil is made, the balance being sold as germ meal to feed dairy cows. It is the fat that causes the cornmeal made in an ordinary mill to become rancid when kept. Home grown cornmeal should be made at the furthest every week.

The following notes on the structure of the corn grain are taken from the Agricultural Gazette of New South Wales, and should be studied by all corn growers.

Separate a grain of corn into the following parts:—

1. *Tip Cap.*—This is the part by which the grain is attached to the cob, and which sometimes adheres to the cob when shelling (especially when immature), but more often comes away with the grain. Its removal from the grain exposes the black hilum or scar protecting the lower end of the germ.

2. *Hull.*—This is the thin skin covering the entire grain. It is easily removed by soaking the grain in water for a time. Observe that in a white or yellow grain this hull is quite colourless, but that in a red grain the whole of the red colour is contained in the hull.

3. *Aleurone layer.*—This is another thin covering of the grain immediately beneath the hull. It is more easily distinguished in a purple (so-called black) grain, in the aleurone of which the whole of the purple colour resides. This covering does not extend over the germ. It is rich in protein or flesh-forming material, and is also called the horny gluten. It contains the brightness or lustre of the grain, which loses this character on its removal. Brightness is an indication of a large percentage of protein, and bright grain, therefore has a higher feeding value than grain of dull colour.

4. *Germ.*—This part occupies the front of the grain, and extends from the tip to half-way or more towards the crown. It contains most of the oil or fat of the grain, and when freshly cut should have a glistening appearance on the cut surface. A discoloured appearance is caused by frost or by heating in storage when too moist, in which case the

grain will not germinate. The germ, which may be removed from the grain with a small sharp knife, consists of an outside covering called the scutellum or shield enclosing the delicate young shoot and root.

5. *Starchy endosperm or white starch.*—This part extends around the germ from the crown to the tip, and varies in amount in different types of grain, being almost entirely absent in flint corn, which has little or no dent in the crown, and abundant in large-dent corn which is deeply dented at the crown. The dent is caused by the starchy endosperm contracting more rapidly in drying than the horny endospern which surrounds it.

6. *Horny endosperm or horny Starch.*—This part comprises from 35 to 45 per cent. of the grain of dent corn, and determines the hardness of the grain, as well as having some influence on the protein content or feeding value, as over 40 per cent. of the total protein of the grain is contained in the horny starch.

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CORN MEAL.

I doubt if there is any person in Jamaica who has derived the full benefits of a Coffee Mill as much as I have done. For this reason, I will give you the results of my experiments and if you think any one else will be benefitted by the information given, you may have same published in your JOURNAL.

In the first place I have made cornmeal with my coffee mill that would make some of the imported corn mills feel ashamed. I intend to send you a sample so you can judge for yourself. Now, this is how I do the thing: First, I have the mill properly cleaned with hot water and dried. Then I screw it down so that the corn comes out in coarse grit for a first grinding. Secondly, I screw it up to three-quarter tight and pass the grit through which should come out nearly done. Thirdly I screw up as tightly as possible, return meal to mill and the result is that after sifting I get as fine a meal as could be desired. Again, if I desire to have a real good plate of peas soup, all I have to do is to pass the peas through the mill before cooking and the result is marvellous. It cooks much quicker and far better. I have not tried it with banana or potato chips but I feel confident that the same results can be obtained. Of course, it takes up more time and labour than the corn mill, but the results pay much more when you haven't got a corn mill of your own or nearby.

H. E. CARBY.

Bybrook, Portland.

This is interesting and useful information. No need to wait until a large corn mill can be got: meanwhile the ordinary 4/ coffee mill make the household cornmeal. We have seen the sample which is really good.—Ed.

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PREPARATION OF LAND.

Begin to prepare land for spring planting now. Hasty preparation just when planting time is at hand cannot give the best results. We believe in clearing early and letting the fine bush and grass lie to rot, the large sticks and prickly bush must usually be burned when the former cannot be piled up to be used for firewood. Then the land must

be broken up early. The action of the sun and breeze on the clods will in a month or more put these in such condition that after a good shower of rain, they will easily break up and so save labour in refining, and this thorough aeration of the soil tends to fertility. The argument that weeds will grow meanwhile is not good enough. If the weeds do grow it pays to weed the plot. Weeding is then sure to be less when the crop is actually planted.

Although there are general principles and practices which can be laid down to be followed in planting, districts and localities differ so much in Jamaica with its dry and wet areas and its varying elevations that there cannot be an invariable rule as to when to plant and how to plant. In each district men by experience have found out how best to deal with the crops they are familiar with, to a certain degree. But even then the practices and experiences of others in different districts but similar circumstances may give some new ideas to be tried cautiously. All practices are subject to revision, improvement and change, but in agriculture alterations should be made cautiously and no plunges made into the new and strange.

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LEAF BITTEN DISEASE OF COCONUT.

Last November (1916) I carried out some experiments with Leaf Bitten Disease of Coconut which might be of interest to readers of the JOURNAL especially as this disease has lately been spreading in certain sections of the Island. When these experiments were carried out no copper sulphate was to be had.

Tree No. 1 was situated approximately six miles from the coast on a property on which no less than 20 odd cases of Budrot had occurred within two years. The owner mistaking this Leaf Bitten disease for Budrot, so badly affected was the tree, was about to have it felled, when I happened to be passing, and my attention called to this new form that budrot was taking on. The last two leaves were mere stumps and three of the preceding ones were badly disfigured. These I cut away to just above the bud. The tree was not a very tall one so with the help of a ladder I was able to get inside the "house," and do all that was necessary myself. After I had cut away all trace of the disease I doctored the tree with a mixture of 2 quarts of slack lime, 1 quart of coarse salt, and after this was put in and around the bud, I poured on about 4 quarts of strong jeyes and water mixed 1 to 8. On my last visit two weeks ago I found that the tree has completely recovered and shows no trace of the disease.

Tree No. 2 was on the Sea Coast, but was not quite as bad a case as the one before mentioned. Several of the leaves were affected and the last was reduced to a hard stump about a foot high. From observation it would appear as if this tree had an attack sometime before which it threw off only to re-appear in acute form.

After removing the affected parts I treated this tree with sulphate of iron and lime. I dissolved a lb. of sulphate of iron in 4 galls. of water and with this I mixed about 5 quarts of lime and gave the tree a proper washing down, trunk and all. I don't suppose the washing of the trunk served much purpose but as I had the mixture it was used up. I took care to throw the residue in the bud. This tree has also recovered and is now looking quite thrifty.

There can be no doubt of the initial diagnosis as a sample of the stump leaf from one of the trees was sent to the Microbiologist who confirmed my observation as to the nature of the disease.

MARTIN RENNIE,
Agricultural Instructor,
Trelawny and Eastern St. James.

Falmouth.

We submitted the above to the Microbiologist who has given the following memo:—

Office of Microbiologist,
Hope, Kingston P.O.
3rd October, 1917.

I have yours of the 26th ult. enclosing report of Mr. M. Rennie on treatment of Coconut trees attacked by a Leaf Bitten Disease.

Tree No. 1 was apparently at Chester; if so, it was probably one pointed out to me by Mr. Rennie last year. The disease was Hard Leaf Bitten, and an advanced case. . Chopping back the heart leaves until all trace of disease was removed, and application of lime and salt mixture appear to have been quite effective. The addition of the jeyes fluid was probably unnecesssary; at any rate No. 2 recovered although it received no jeyes. The sulphate of iron and lime liquid mixture applied to No. 2 contained a large excess of lime beyond what was necessary to throw out the iron. Two pounds of lime to 1 pound sulphate of iron is more than enough. This mixture is a less effective fungicide than the liquid lime and copper sulphate mixture (bordeaux mixture). Slaked lime was used in both cases—for No. 1, 2 quarts and for No. 2, 5 quarts; possibly the lime alone would have had the same effect as the mixtures: the essential point in the treatment is to chop away all the diseased tissue at the heart and burn it; if this is not done thoroughly, chemical application will not prevent the reappearauce of disease. Upstanding diseased leaves should not be left when treating as spores of disease are liable to be carried down such limbs by rain and reinfect the leaves in the heart.

S. F. ASHBY,
Microbiologist.

———:o:———

THE GARDEN A HOME NECESSITY.

(Lecture Delivered to the Lucea Branch, by R. C. Somerville, Instructor.)

In normal times gardening is a pastime, a pleasant digression from the ordinary work one has to do. Men who do brain work and women occupied with household duties find a recreation in garden work. At all times it is a source of profit, for it prevents the spending of many a hard earned shilling and is the source of a sure income that can provide some of the necessaries of life. During these abnormal times of stress and shortage in the world's food supplies, brought about by the war, and in our island keenly aggravated by the frequent recurrence of destructive hurricanes, it has become a necessity, a national duty and the man who can produce his own food and enough over to sell to others is doing the empire's work.

In many countries artificial means such as hot houses and manufactured soils and manures have to be used at great expense and trouble, while in this country from sea level to the tops of the highest

mountains the vegetables that are most desirable will give satisfactory results. Last year I saw potatoes, cabbages, turnips, carrots, tomatoes, ochras, garden eggs and kohl rabi grown at a distance of 10 chains from the sea shore at Green Island; that compared favourably with those grown at Darliston 1.400 feet above sea level. You are all aware of the success with which Mr. C. J. M. Smith grew them in Lucea and was able to furnish the market with nice cabbages and other vegetables.

The advantages of gardening are so obvious that I will not here mention them but confine myself to how to grow a small garden around the cottage that will be both pleasurable and profitable. The land should be thoroughly forked and all stones and roots taken out.

Good cultivation will make up for deficiencies in the fertility of the soil as the roots will find it esay to penetrate them in search of food.

When it is necessary to manure, well rotted stable manure, or the droppings of cattle or sheep that have been well fermented and pulverized should be used. Wood ashes and collected sweepings are also excellent for the growth of vegetables.

Liquid manure which can be easily made is very helpful in giving concentrated food to the young plants. A barrel in which well rotted stable manure has been put and to which a gallon of lime has been added should be nearly filled with water. The addition of other waste liquids such as urine which contains about 90% of water and the remainder composed of salts and rich foods for plants, will have its manurial value. Carefully prepared liquid manure should be allowed to stand about two weeks before using. A little at a time given in the watering pan will be highly beneficial to the young plants especially such as are grown for foliage as cabbages and lettuce.

In the preparation of the soil, care should be taken to provide suitable drainage so as to prevent water-logging and to ensure aeration of the soil in dry weather.

Beds should be slightly raised but not so much as to give them the appearance of a series of graves which causes over draining. Attention to details will be found to be a good policy and the use of pegs and a line will ensure symmetry which gives a pleasurable appearance to the eye.

I shall now give a few short hints on the vegetables that are most commonly grown in the island and which I think suitable for this parish.

CABBAGES.—Sow seeds in boxes or in a carefully prepared nursery bed which is highly manured in October and November for the early planting and again in February and March for the Spring. Scatter the seed very thinly taking some trouble over it, and cover them very lightly with a thin layer of soil. The best varieties for Jamaica are Succession, early Drumhead and Wakefield, the first however having many points in its favour. Small trenches should be made and the seedlings *planted out two feet apart in the bottom.* This is found convenient for moulding the plants. Manure should be ploughed in at the bottom of these trenches. If the weather is dry the plants should be watered while they are young. If caterpillars attack them these should be hand picked at once. When cabbages are cut if the stumps are allowed to remain the leaves being removed, they will

spring at the axils of the leaves and these shoots can be taken off and used as a substitute for brussells sprouts.

TURNIPS.—This vegetable is getting every year more popular. They are very easily grown. Sow on a soft deep rich bed broadcast. When the seedlings appear they should be thinned out. This process of thinning out should be done till the plants are standing 4 to 6 inches apart, if large turnips are wanted, and the plants thus taken up should be planted out in other beds. The tops of the young turnips make a fine spinach when cooked. They should be used while soft and not allowed to grow too hard.

CARROTS are very easily grown. Have the bed deeply and, thoroughly prepared, sow in drills, thin out leaving only healthy strong plants, keep free of weeds.

LETTUCES.—Sow in boxes. Ants are very fond of the seeds, therefore sprinkle some ashes soaked in kerosine oil over the seeds or place a band of tar around the box. Transplant the seedlings before they have advanced too far and keep well supplied with water.

In order to eat well they must be grown quickly. The plants ought therefore to be grown in deep rich soil with plenty of moisture and if in a dry season a little liquid manure should be given.

PEAS.—No garden is complete without its bed of peas. Prepare the soil as directed in the foregoing. Sow the seeds about four inches apart in double rows so as to allow the sticks to be planted; the double rows should be 4ft. apart. As soon as the plants are about 4 inches high stick them with tall sticks having twigs from the bottoms to the tops, peas are clingers, not climbers like beans, and need twigs to climb on. Beans similar to above, only the double rows may be 3 instead of 4 feet apart.

The best varieties grown here are Old Homestead, White Crease-back, Asparagus and Suttons, Earliest of All. Dwarf varieties are very popular and should be planted at the edge of beds. Wax beans, Bush lima and Marrowfat are good varieties.

TOMATO.—No vegetable has become so fashionable as the tomato and we are told it is one of the most healthful that can be used. To be able to grow it well therefore, must be a desire of every gardener. The plant grows wild in Jamaica and needs in its wild state little or no care. There is no crop that I know that so much repays careful cultivation as the Tomato. The seeds should be sown in boxes and transplanted when about four inches high. Some planters say that they should be transplanted twice as they give better results, and I have proved this to be correct, but there is not always time for this. They should be set out 18 inches apart in very rich trenches manured with stable manure with lots of litter in it. Place a stick six feet high to each plant, tie the plant to the stick and continue to tie about every foot up, remove all branches and offshoots the plant puts out. You will soon find that at every alternate leaf but one flowers will come and bear large tomatoes in bunches of from 6 to 9.

The best varieties are Crimson cushion, Ponderosa, Stone.

Such plants as callalou and indian kalé should be in every garden, as they provide an everlasting source of soup and greens.

POTATOES.—This most universally used of all tubers can be grown in this country equal in size to any part of the world and equal any in flavour.

The soil must be well manured and thoroughly ploughed then trenched 18 inches apart and a good dressing of manure dug into the bottom of the trenches. Cut your sets. If the tubers are large, cut into 4 or 2 according to size; if small plant whole. Plant in the trenches 9 to 12 inches apart turning down the cut side, cover lightly. When the plants are 6 inches high mould in some of the bank and see that the ground is about level, the banks having been broken down, into the trenches. After 4 weeks more mould again until the whole of the bank is drawn in against the plant forming the bank where the trench was formerly.

The crop takes only 12 weeks and should be given every desirable condition so as to lose no time in the process of growing and bearing. The best crops are those planted in November, January, February, March.

The successful gardener must be diligent in his work, and in fact must be full of the love of the work. He must be diligent to assist nature in her endeavour to benefit him. He must promote the growth of crops by every means at his disposal by the use of the hoe, the keeping down of weeds which rob his plants, by the use of the watering pan in dry weather and by encouraging a love of nature in himself.

It is of course impossible to say all one would like on so interesting a subject in one lecture, without tiring even a willing audience. If any one here has gained any knowledge, or had their interest kindled to the extent of starting a vegetable garden, I have had ample reward for coming here to-day.

:o:

KILLING OF YOUNG FEMALE STOCK.

We should like our Branch Societies to discuss this matter. Owing to the high price and scarcity of imported salt fish, with our home meats running much at the same old price 4½d. to 6d. a lb., there has been a very much larger demand for beef, mutton and pork, naturally, to the extent of four or five times as much in country districts as in 1915. The greatest increase has arisen in the country parts because imported salt fish is dearer there owing to transport, and in many places is not sold at all now, because it cannot be sold with any profit, while on the contrary beef is 4½d. per lb. in these parts and 6d. per lb. in the town. In order to satisfy this demand there are more itinerant butchers than ever,more thieving of goats than ever, and even young nannies and shoats are stolen or purchased and slaughtered, to a very great degree. This is not so bad, however, as heifers even as young as a year old being turned into beef. It would be difficult to control this business if meat is wanted and steers and hogs and wethers became scarce; then young animals must be fallen back upon so long as they last, the hope being that they will at least last until the war is over. But remember that things will not right themselves immediately the war stops. And where shall we be for breeding stock? Every country is short of stock and we shall not be able to import. If one should go on the policy "that sufficient for the day" is enough and let the future look after itself, let us at any rate discuss the matter in all its bearings first. Should there be any temporary or permanent legal restriction on the killing of female stock suitable for breeding purposes? People would first ask what are we to eat in place of our home meats, if we cannot get imported salt fish, or

salt beef, or pork? Just what is being done in Great Britain, France, Italy and the United States, where meatless days two or three times a week are now the order. What are we to eat in place of meat? Simply make more use of the legumes, the different varieties of peas and beans and bring in the art of the cook to make dishes of these varied and palatable.

—:o:—

FISH.

But there is one source of food unlimited, which with some brains, organization and effort could be utilized to provide everybody in the country with food that would make us independent during war time of the fish the Newfoundland fishermen catch for us; and which would provide us with sufficient animal food to save our limited supplies of animals and preserve our breeding stock from extinction. This food is the fish of the seas around our shores, a source of food that is not tapped to a hundredth part of what could be done, and quickly—immediately. If there are not enough canoes and fish pots these can be quickly made, and, meanwhile, organized co-operation under Government auspices can arrange for gangs of fishermen using the available canoes day and night. Small curing stations round the coast can be established within a month; no elaborate apparatus is necessary. A special schooner load of coarse salt could be got from Turks 'Island to drop supplies at the curing stations round the coast. There is no great art in curing fish. It is done by the fishermen of Alligator Pond, Pedro and elsewhere, and corned fish is vended in the interior parts regularly. There can be dry and wet curing. Such places as Alligator Pond and Pedro alone, such being places we know well could supply some tons per week. The small fish could be sold as at present, fresh, and the larger ones corned, but even the small fish can be salted like herring. The ponds at Bull Bay are full of fish. The bay at Port Morant could feed St. Thomas Ye East with fish, and lately round the north coast there were shoals of fish which with any system at all could have been raked in. in immense quantities, and cured, but, left to chance a few odd fishermen there took little beyond the usual daily quantity of fresh fish. We have in our seas an easy solution to our meat stuff problem.

There is an industry of this kind in Barbados. They have a regular fleet of small roughly made boats which go out distances to sea and carry on their famous flying fish industry. These fish are caught in large quantities daily, except in the stormy months, and taken to shore where they are salted and shipped to neighbouring islands and countries. Such an industry is possible here, but on a properly organized scale. Not a canoe here and there, but small fleets travelling together and working in unison.

An industry of this kind in that sometime drought stricken area on the coast line from Alligator Pond to Black River, would be a boon to those districts, where suffering and want are constantly in evidence in the dry years. Many of the people sit idle day after day, doing nothing, because it is too dry to plant.

With a stir in fishing they would be on the go days on end, for these men naturally love the sea, and the women would be employed at the cleaning and preparation of the fish for market.

BE IN TIME.

We in Jamaica suffer from that awful sin of procrastination—always putting off to a better day the things that may easily be done to-day—and a better day comes too late.

The lack of system, the neglect of organized effort is deplorable and acts against progressive effort.

Why not plan out the year's work well ahead and modify the plans as the time moves on! In this way 6 months ahead—at least 3 months—the planter knows the time and place for each crop and he looks out to provide seed and labour for the time appointed.

Prepare your land well ahead for any crop whatsoever but more especially for corn and Irish potatoes, and this year rice, in suitable localities, and do not on any account omit to make up your plans for the year allocating your capital, your lands, and your labour as nearly as possible. Of course, there must be modifications, but you are more likely to succeed in the actual execution of the work and in arriving at an early definite conclusion, if there is systematised effort.

RICE SEED.—We have more than once advised those who would like to plant rice the coming year that the seed must be ordered by *December*. So far, we have received only a few orders.

It is useless asking us to supply large orders in April to June of a commodity which is available in December and January, because we are not going to stock and store large quantities on chance.

To prospective rice growers we say again, send us your orders at once, and give us at any rate a basis on which to order our seed supplies.

* * * * *

SEED CORN.—All in the same class is your seed corn. If planting must be done from January to April or even May according to district order seed to the extent you require and state the time you should have it and every effort will be made to let you have it by that date. What with storms and dronghts and excessive rains our corn crop is often delayed and the seed is sometimes not forthcoming as early in the season as we should like. We have often tried to keep seed from one season to the next but have had demands from late planters which draw so heavily on it as to reduce it materially. As an example, this fall we laid in a late crop for the early planting in January. The demand for seed for distribution in the suitable mountain districts, which had been severely hit by the storm, was so great as to use it all up and in addition a large quantity of good quality unselected corn.

Get your corn land ready now, and let us implore you to plough it and that right early. If the weeds grow you will find there are not so many after all and that they are easily controlled.

* * * * *

POTATOES.—The Irish potato crop again is one of those that need early provision as we have pointed out times innumerable; and yet at the last minute we receive letters like this:

"Please send me a barrel of seed potatoes by to-morrow's freight train. I am thinking of planting a patch and the land is nearly ready."

How can that land have been prepared!!! It seems almost hopeless to din, din, din the same thing all the time.

Read your JOURNAL, mark its hints, act on them and rep results, whether success or failure, and so help your fellow plan in their efforts at progress.

:o:

STORM LOSS IN FOOD CROPS.

It is only now that the full loss caused by the hurricane of 2 September can be estimated with some exactitude. The bigg loss in foods was of course in bananas. In August there were in si as it were, one bunch per head per week for every human being Jamaica until April next year when there would have been a gr increase from the plant bananas coming in probably about a h more. At least 75% of this up to April was gone in a single night.

Coconuts are a valuable food crop because they represent a cook oil which every owner of trees could make for his house, and be in pendent of imported cottonseed oil; 90% of these went in East Portland and will not be there again in any quantity until you trees damaged but recoverable, bear; 75% went in Eastern St. Thom Outside of these parts there has been a great dropping off of n from the smallest to those nearly full—the effects of the storm. should estimate Jamaica's loss of coconuts for shipping and hc consumption as 66 2-3 % for the next year.

The yam crop, which from Christmas would have been in in force has, all over, suffered a reduction of 25% and the bearing been delayed.

One of the chief crops of the Port Royal Mountains, is the fami "red pea." These mountain districts are the chief source of sup for Kingston markets. The usual crop due from the August a September planting is about 1,000 bushels. The extra plant this year was estimated at from four to five times the usual. Th were from 4,000 to 5,000 bushels, if not in sight, still estimatable : the crop in only a few sheltered hillsides and valleys escaped. ' Clarendon and St. Catherine crops of cowpeas were a failure; larg owing to wind and rain; many took in little more than they plant The writer's black eye peas were a dead failure, beaten by the stc and rain. Anyone who stood at the break of day on Sunday, the 2 of September and saw the rain blasts scudding and driving al the ground, or went out and felt the sting of the rain on his face, co well understand how the more delicate ground crops suffered, especi on the exposed mountain sides.

Even sweet potatoes rotted to an appreciable extent the enc September and October, the effect of the rain.

The loss immediately after a storm is usually computed at more than is real, because everything looks blown and batte But this year that was only the case with bananas; they have covered quickly with the heat and moisture. But with coconut tr the loss is far greater than first computed—the effects on mat trees left, and half grown trees are only now seen. It is the sa with the pea and bean crops: hardly anyone thought there wo be such a loss when looking at his fields, the day after the storm.

The writer's sweet potatoes rotted to the extent of 25%, oth more; the young fields of others in other districts because of the bat ing and the rain, did not bear but went on growing vines; their bea has been delayed three months. We should say the sweet pot

crop, at first put down as unscathed, suffered 20% loss. Cocoes on the other hand escaped somehow better than in previous storms. It is only now we can properly compute the losses.

Loss of Food Crops from 23rd September last.

Bananas, a bunch per head per week gone for nine months.
Yams, 25 per cent. for six months.
Peas and Beans, 75 per cent. for three months.
Sweet Potatoes, 20 per cent. for three months.
Cocoes, nil.

With the loss of bananas people have to turn to corn and yams all the more.

When a hurricane occurs there is a flurry to urge that food crops be planted right away; but it must be remembered that most small settlers have staple crops—bananas, coffee, cocoa and corn. It takes a big heart to look at these after a storm and tackle the chopping, the clearing, the pruning, all necessary to be done quickly. If these operations are neglected there will be certain loss. If they are done, then the planting of food crops has to stand over a bit. Then again, the field of yams is generally the first thing to be tackled; the sticks are all blown down, vines broken, hills disturbed.

The Agricultural Instructors and ourselves know all these things and we try to organize some system according to the district and even according to every man's circumstances.

:o:

CASSAVA FARINE.

We have written on the making of farine from bitter cassava very often; it has in fact been written upon in this JOURNAL from the first year of the Society's operations as many of the older readers will remember. The Society once experimented on the growing of bitter cassava for the purpose of making farine, and attempted to popularize this useful food; it was stocked for sale in Kingston, but did not take the public taste.

Native products have always been looked at askance when similar imported foodstuffs could be got, until now when the force of necessity makes everyone look anxiously to the development of all native foods and more especially those which can be stored and will keep for a long time. Farine was meant to be to some extent a substitute for wheat flour and corn meal. It was hoped that almost every household, especially in the dryer districts, would have a barrel or more of farine stored in order that at any time of scarcity, temporary or prolonged, the household could always get a plate of porridge or a pudding. There are periods of prolonged rain when it is difficult for a small settler to get to his ground, and there is very often nothing in the house as there are so few products which can be stored with success, but a barrel of farine would always be handy. There were also at times periods when cassava was plentiful and sold at a low price. At these times cassava could have been used to make farine and when the crops of cassava were over and it became dear, the farine could always be a standby. At the present time the country wants native foodstuffs that can be stored away in barrels to take the place of flour. This could be readily obtained in Cassava in the form of either cassava farine or cassava meal. It would be a most useful thing at this juncture for large quantities of bitter cassava to be planted for making farine

or cassava flour and cassava bread. The Government should set an example of this by planting a large area on their lands in the drier districts which at present lie idle. Some of the Parochial Boards own lands not being utilized and they also might show example. There are still some of the old farine pans here which we have found very useful in other respects than making farine. Corn, Guinea Corn and Cassava Farine are almost our only food products suitable for storing.

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POTATOES.

A correspondent writes us as follows:—

"Fancy two pounds (2 lbs.) Potatoes (Irish) planted in a bed in my School Garden yielded 45½ lbs. This is no joke, but a pleasing reality."

(Sgd.) D. J. L.

Mizpah, Walderston,
23/11/17.

——:o:——

COCOES (COLOCASIA ESCULENTA).

(Extract from Report of R. C. Somerville, Agricultural Instructor.)

I desire to give in this report a result of experiments I have been making over a period of two years with the cocoe rot that is so destructive in some parts of the Island to this useful crop. Darliston planters had given up the planting of the "Commander" varieties which are the best. In 1915 I planted 3 plots—(1) With heads found at Darliston, having no trace of disease; (2) with heads grown at Darliston from a diseased field and (3) with heads brought from Green Island where the disease is not known.

All the plots grew vigorously but plot No. 2 rotted out before the stalks were full grown.

Plot No. 1 was found to start rotting when the cocoes were ripe so that the loss was only in heads.

Plot No. 3 was in perfect order.

In 1916 I planted from the seed plot and also another plot from heads brought from Green Island.

In October the plot planted from the heads grown here last year contained 5 rotten plants and other showed signs of going. The conclusion I have come to is to feed all Commander heads grown here to pigs and only grow from heads grown in a healthy centre every year. The heads thus transported from one place to another give excellent results.

Darliston P.O.

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CHANGES.

Getting into a daily rut, of whatever kind, leads to stagnation of body, mind and spirit. Any kind of change,—of work, of scene, of habit, of thought,—would be of incalculable benefit. Monotony brings on melancholia. Years ago, before the days of the trolley, when the car horses of New York City were gradually sickening and dying off, and many veterinarians were puzzled to discover the cause,

the heads of the various car lines were called together to confer as to what had best be done. There was one wise man in that whole company. He divined that the real cause was the deadly monotony of the daily, undeviating route of travel. He suggested the plan that the different companies agree to a general interchange of horses. This plan was accepted and immediately acted upon; and surprising and satisfactory were the results. Within a week the seemingly worn-out animals took a new lease of life. They lifted their once drooping heads, pricked up their ears, and intelligence again shone from their eyes. They covered their new routes in half the time, and gave up the foolish idea of dying, which had for a time obsessed them.—*Mark Lane Express, (England).*

We have often noticed that among horses: if they are only used on one journey, and that a stiff one, say to one railway station and back, they appear to lack life, and knowing their destination they save themselves to do it within their powers, unless they are badly whipped, when the likelihood is that they will be done up and have to walk the last few miles. But immediately you turn their heads another way on a strange journey, they travel better. Horses that have a variety in work, keep livelier and travel better.

And the same principal applies to men and women. Is not that one of the reasons settlers like to go to market on Saturdays and won't be denied of their trip even though they are offered sales on the way at even better prices?

There are sufficient reasons for customs and practices which may at first seem strange—even ridiculous, but have good foundation.

:o:

STAPLE FOODS IN JAPAN.

The three great staple food materials in Japan are rice, barley and soy beans. The most important of all is rice, though in the poorer country districts it is too expensive for general use, and is replaced entirely or in large part by some cheaper grain, wheat, barley and especially millet being more common.

The chief animal food is fish, which is much used near the seashore and less extensively in the interior. Poultry and eggs are used in small amounts, and beef, mutton, and pork form an inappreciable part of the diet of the people in general. Such animal foods as meat, milk, and butter are used more extensively in the cities, especially by the wealthier classes, than in any other region.

In the case of rice, barley and millet, the cleaned grain, (i.e., with hulls or chaff removed) is generally used without grinding, though barley and millet are commonly cracked. Wheat is ground, and is used to some extent in the manufacture of macaroni, vermicelli, and cakes, but more largely in combination with soy beans in the preparation of shoyu. Legumes are used to some extent in the natural state, but the amount thus used is small compared with that employed in the manufacture of miso, shoyu, and tofu, which are of universal use in Japan. A few sorts of fish are eaten raw. Fish are also cooked, or made into various preparations.

CASTOR OIL SEEDS.

The following article was forwarded by the French Consulate in Trinidad to the Colonial Secretary here, with the request that attention be drawn to the cultivation of castor oil seeds for which there is a large demand at present, as castor oil is the only lubricant used in the motors of areoplanes.

It is, however, news to us that cattle will eat the leaves of the castor oil plant. They certainly do not consitutute an excellent forage for milch cows here.

The castor oil plant as everybody knows, grows wild or semi-wild all over the country—in even the driest parts—and the production would look easy, but some years ago when the cultivation of this plant was started systematically as an industry, the returns were very small. This however, was largely due to the bad luck of severe drought at the time. While the castor oil plant can stand dry weather to a remarkable degree, still it is not drought-proof, and too long continued dry weather naturally affects the yield. With seasons such as we are getting, and the price that the seeds are going at, there certainly seem to be prospects of a good return, where a planter has suitable land that is not occupied with any other crop. If he is not prepared to launch into the growing of food crops on such land through fear of praedial larceny, he could try growing Castor Oil Beans.

The most common variety of castor oil seeds here , is the shall gray, and next the large gray. These are commonly found everywhere. But better varieties to grow on a commercial scale are the brown, the white and the black seeds.

The matter printed below was sent in from the Colonial Secretary an,d was submitted to the meeting of the Board of Management of this Society held on the 15th November, and was thereafter published in the Newspapers. The attention thus called to the matter resulted in numerous letters to us asking for seeds of the best varieties. We had only small stocks of these in hand—just enough to send out packets as samples, but since then we have secured larger quantities, and if anybody is interested we can at the time of writing supply seeds for planting.

—:o:—

A PROMISING AGRICULTURAL INDUSTRY.

An esteemed correspondent under the "non de plume" of "Castor O'Hill" sends us the following for publication:—

In view of the development in war materials and the great number of motor-engines for aeroplanes, cars and lorries which are being used, night and day, on the different fronts by the Allies, the demand for lubricants has increased considerably. As everybody knows, mixed with mutton fat Castor oil remains unsurpassed as a lubricant, and the Germans who, now more than ever, have to resort to the use of heavy petrols mixed with animal and even human fats know it to their cost and bitter experience.

The "Palma Christi" (Ricinus Communis) belongs to the Euphorbiacae family, and is found growing nearly everywhere both in Trinidad and in Tobago in a semi-wild state. It is an annual plant in temperate climates; but in tropical countries where its growth attains up to fifteen feet in height, it is a vivacious and even a perennial plant.

Two varieties of "Palma Christi" seem to be found in Trinidad, both yielding a great quantity of oil; one producing greyish seeds marked with dark stripes; and another giving violet or dark blue seeds.

In Venezuela, it is said that there exists a variety producing much larger seeds than any of the two mentioned above, and which ought to be easily procurable for planting purposes.

The "Palma Christi" thrives best in friable, light and rich soils principally of an alluvium formation. The seeds are planted in small holes, generally at the beginning of the rainy season, and lined at about six feet apart. The crops begins five or six months after planting, when the fruit envelope is ready to burst open, and in tropical countries the plant continues to bear for several years.

One may depend on a crop of 325 to 400 kilos (882 lbs.) of seeds to the acre, according to the nature of the land and the variety of the plant.

When freed from their tegument the seeds of "palma Christi" yield up to 65 per cent of oil; but if ground and pressed, while warm, without cleaning a good percentage of oil is retained by the cake, and the yield is only from 35 of 37 per cent.

"Palma Christi" leaves are considered an excellent fodder for milch cows, and the oil-cake, which contains as much as 5 per cent. of nitrogen, is a first class fertilizer, although on account of its laxative properties it cannot be recommended as a stock feed. Besides, the leaves can serve to feed the silk-worm known as the "Attacus Ricini," the cocoon of which produces the "Eri" silk, much appreciated in Europe.

Before the war, the price of "Palma Christi" seeds fluctuated between 60 to 70 dollars per ton; but since it must have gone much higher. Some years ago, an attempt at "Palma Christi" cultivation was made at the famous "Cocal" of the "Bande-de-l'est;" but as the plants became the feeding ground of a great number of caterpillars which were beginning to attack the coconut trees, they were destroyed. Probably, the mischief alluded to could have been stopped by spraying the "Palma Christi" with Bordeaux mixture.

On the other hand, Mr. Alejandro Ducharne, who has just proved the splendid results which may be achieved by a practical agriculturist, has destroyed to his great regret, to-day, on the reclaimed lands, bordering the sea, along Wrightson Road, a quantity of "Palma Christi" plants which were growing wild. Nevertheless, his object is to grow tobacco, and knowing the exceptional fertility with which the dumping of refuse, etc., from the town of Port-of-Spain has endowed these lands, we do not hesitate to predict for him continued and well-merited success. As most probably the war will not be over in six months time and that the United States of America intend to build a great number of aeroplanes the British West Indies planters ought to take advantage of the present opportunity to plant nnd cultivate "Palma Christi" as in the case of some peasant planters in a few districts of Trinidad, who from what is reported are quite jubilant over the results of their own initiative in that line, although on a rather small scale.

As already said, everything rests with an easy and extremely simple cultivation. As a vivacious plant, "Palma Christi" in Trinidad finds all that is required for its prosperous growth—heat and humidity. It demands no cultural care and good crops are assured under tropical

conditions. Moreover, there is nothing to fear about praedial larceny of that special product for which a fair price can be obtained; while the shipping can be relied upon on account of its increasing demand for the national defence.—From the *Port-of-Spain Gazette, Trinidad.*

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STOCK NOTES.

BUTCHERS' LICENSES.—It goes without saying that meat—the flesh of cattle, pigs, goats and sheep—forms a most important part of the food eaten. Animals are subject to many diseases some of which are transmissible to human beings, even if the meat is cooked; if it is not cooked through and through as roast meat is seldom served there is risk of conveyance of disease to those partaking of underdone meat. Therefore only healthy animals are fit for human consumption and there should be check and supervision over those who kill and sell meat. Animals are more or less keenly subject to pain. They should therefore be killed as humanely as possible. Instead they are often subjected to the most fiendish tortures through callousness, ignorance, and sometimes absolute brutality. Yet any Tom, Dick, or Harry can buy and kill animals any time and anywhere (except within the limits of towns where regular slaughter houses are the lawful places), and hawk the meat from door to door, or offer it in the public market place to the detriment of the regular and professional butcher, who kills at an appointed place from day to day, or week to week, is known, and has some stake in his business.

The killing of small stock, such as goats and pigs, is carried on to a large extent and is useful in country parts as supplying meat during the week when beef is not available. A great deal of stealing o. goats in order to satisfy this trade takes place, and very little check of this theft can be done where there are no regulations of the trade. It is easy to steal, kill and dispose of the meat and the skins. This Society *from its inception in 1897 has constantly advocated that all butchers should be* registered—licensed—not by a heavy fee, but simply enough to pay for registration and some supervision. Perhaps 20/- a year for all stock and 5/- a year for small stock butchers, would meet the circumstances. And like a produce dealer, every man proposing to kill animals and sell the meat in a public place should have a recommendation from a J.P. or the Police of his fitness for his proposed job.

At present the business of supplying this important article of diet—meat, whether beef or mutton or pork, is in a chaotic state and needs regulation and this can be done by the registration and licensing of all persons who wish to carry on the trade of a butcher.

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POULTRY NOTES.

FEEDING.—The problem of feeding fowls with profit is again before us, but it is not so bad as last year. At the time of writing (end of November) corn is 6/- per bushel in the country, and 7/- to 8/- a bushel in Kingston, according as one gets direct from the grower or from the stores. Last year corn was 8/- to 10/- a bushel, and very scarce at that. There is no scarcity this year, but as there is much demand and so many stocks of corn are stored for the making of cornmeal this keeps the price up. With corn at 4/- a bushel or 1½d. per quart, and using some waste scraps, fowls for the household can be raised with profit at the cost of about 1d. to 1½d. per head per week; but with corn at 8/- the cost is 3d. per head per week. Hens do not lay well on corn alone. Even if the other food is not so nutritious as corn, *variety of food or variety in the form of the same food fed, makes the* fowls thrive better. Even if we repeat ourselves, we will say that feeding the corn "offal", i.e., what is left over after making cornmeal will prove economical in these times. There is a fully equipped cornmeal factory at Brown's Town which turns out commercial cornmeal, i.e., the same as imported cornmeal, and the bye-products No. I. and No. II. are economical and efficient foods for fowls, calves, dairy cows and pigs. No. I. is even good for human beings at a pinch, and may be fed to dogs, fowls and calves raised by hand. No II. is suitable for dairy cows, pigs and horsestock. No. I. is of course good for these too. We have no other interest in these other or any foods than to try and guide the very large number who have not the opportunity to enquire into such matters as we have, and we always first make a test of everything we may write about.

In combination with these foods we also recommend for economy in these times, the use of rice bran from the native grown rice of Westmoreland. It is not so good as imported wheat bran by a long way, but looking to the comparative prices and the necessity to save shipping tonnage, every one who is patriotic should try to use

such native foods when they are available, and they are available. We will cheerfully give all information on this subject of feeding, and help to make such foods available. The corn products are sold wholesale at about 1¼d. per lb. and the rice bran under 1d. per lb.

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We have often before written about changes in feeding, and how this can be done. Every poultry feeder should try to stock some rice bran and corn offal. "Offal" does not sound a nice word but it is descriptive enough. It is not all corn trash but contains most of the germ which is fatty and from which cornmeal is made (we speak of the St. Ann Products Co., No. 1) and a good deal of the outer layer containing a goodly proportion of protein. A mixture of rice bran and this corn offal—say one to two—with any boiled peelings from the kitchen, makes a good morning feed. Cracked corn is the food for the evening. Where corn alone must be fed, vary the changes with boiled corn or at least soaked corn, i.e., corn on which boiling water has been poured and which is allowed to cool. Then parch the corn occasionally; this is a healthful food as a change.

* * * * * *

We have taken our own advice and made early hatches; the first 11 chickens from 13 eggs on November 23rd. The second will be out on 8th December, and a third on 15th December.

These eggs are from two hens that positively refused to moult and are still laying in November. They are mated to a cock in his second year, which was kept separated from hens during the moult, so that he is fresh and vigorous. We consider that these eggs are worth their weight in silver at least, as the hens are not pampered or forced or highly fed, but are two that scratch and scrape from early morning to late evening. They have laid a full year.

We only mention this to show that we act on the advice given others to make early hatches this season. By the time thechickens are eating an appreciable quantity of corn, the new crop will be in.

* * * * * *

Eggs and fowls are very dear, as was easy to foretell, dearer than usual at this dear time of the year. Our preserved eggs have come in handy this month, as we were saving other eggs for setting. Eggs put up in water glass and lime water in June and July are now perfectly good, even for boiling.

:o:

WAR GIFTS.

The shipping arrangements are so uncertain in these days that it is practically impossible to organize a consignment of fruit for shipment to Military and Naval Hospitals in the United Kingdom, etc., as we have done since the outbreak of the war. We had a fairly large consignment ready for shipment on the 17th Nov., near which date we expected that the R.M.S.P. "Quillota" would sail. She was, however, more than a week late and the fruit could not be kept. Just at this time, fortunately, the Hospital Ship "Guildford Castle," which brought back some of our invalided B.W.I.R. men, on her way to South Africa with wounded South African troops, came in, and to her we gladly gave what fruit we had ready for shipment.

Fruit which came in later we sent up to the Hospital at Camp for the invalided soldiers there.

Last week we were only able to make our 53rd shipment when we sent the very small quantity of 7 boxes of grapefruit to the United Kingdom. all that was in hand fit for shipment abroad. This fruit was the gift of Mr. E. E. C. Hosack of Annotto Bay, sent for any Hospital, but as Mr. Franklin and Mrs. V. E. Manton, both of Kingston, had made special arrangements for fruit (which came among the lot which there was no chance of shipping,) to be sent to two special institutions, we requested Mr. Aspinall (who, as is well known, undertakes the distribution of our War Gifts on the other side) to send these boxes of fruit to the following:—

4 boxes to Queen Mary's Royal Naval Hospital, South-end-on-Sea.

3 boxes to 1st Aid Nursing Yeomanry, B.E.F. France.

The following are the lists of gifts received during the last month, and disposed of as stated:—

To H.M. Hospital Ship "Guildford Castle."—

Donor & Address.	Gift. Oranges.	Grapefruit.
E. E. C. Hosack, Annotto Bay	——	8 boxes
L. J. Spyer, Bog Walk	——	40 boxes
Miss G. M. Glanville, Mile Gully	——	15 boxes
Mrs. H. B. Wolcott, Richmond	6 boxes	——
W. Lofthouse, Balaclava	10 boxes	1 box
David Mills, Montego Bay	37 boxes	——
Mr. Franklin, Kingston	4 boxes	6 boxes
Mrs. H. E. Crum Ewing, Mandeville	12 boxes	——
Miss F. Sharpe, Retreat	——	2 small boxes
Total	69 boxes	72 boxes

Miss L. King, Newport	1 package magazines, etc.
Mrs. J. S. Thompson, Falmouth	2 boxes do
Mrs. M. E. Clemetson, Port Maria	1 box do
Miss E. L. Gifford, Race Course	1 box do
St. Thomas-ye-Vale Red Cross Guild, per Mrs. McPhail, Bog Walk	1 Case Hospital Comforts

GIFTS SENT TO THE HOSPITAL AT CAMP.

Robt. Craig, Chapelton	48 boxes Oranges
Mrs. V. E. Manton, Kingston	6 boxes Oranges
Mrs. Moxsy, Chapelton	6 boxes Oranges 5 boxes Grapefruit
Mrs. Hudson, Guanaboa Vale	1 box Lemons 4 boxes Grapefruit
Miss Swaby, Ocho Rios	1 barrel Grapefruit
Total	70 boxes and 1 barrel

GIFTS DIVIDED BETWEEN FORT CLARENCE AND ROCKY POINT BATTERY.

Mrs. Hudson, Guanaboa Vale	10 boxes Grapefruit
Captain Rerrie and W. H. Rigg, Flint River	11½ boxes Oranges 3½ boxes Oranges
Ernest Verley, Kingston	20 barrels Citrus Fruit

The following which have not been previously acknowledged in print, hav also been received and given as undernoted:—

Donor & Address.	Gift.	Destination.
E. E. C. Hosack, Annotto Bay	8 boxes Grapefruit	French Cruiser "Admir Aube" sent 22/10/17
A. C. Westmoreland, Annotto Bay	6 barrels Grapefruit	3 to Rock Point Battery, and 3 to Fort Clarence, sent 22/10/17.
E. E. C. Hosack, Annotto Bay	9 boxes Grapefruit	7 to Fort Clarence.
A. E. Wigan for Hartlands Coy., Hartlands	3 boxes Grapefruit	
Mrs. Rerrie, St. Ann's Bay	2 boxes Grapefruit	7 to Rocky Point Bat tery, sent 7/11/17.
Shipped independently— Robt. Craig, Chapelton	50 boxes Oranges	Military and Naval Ho pitals in the United Kin dom, on 6/11/17.

52ND SHIPMENT OF WAR GIFTS, 25TH NOVEMBER, 1917, PER R.M.S.P. "QUILLOTA."

Donor.	Gift.	Destination.
St. Ann's Ladies Committee, per Mrs. Allwood, St. Ann's Bay	4 cases Cigarettes	St. Ann's men of the B.W.I.R.
Jamaica Railway Smoke Fund, per S. A. Martin, Jamaica Railway, Kingston	1 case Cigarettes	Railway Members, B.W.I.R., France.
do		Railway Members, B.W.I.R., Egypt.
Officers 1st. W.I.R., per Captain Vince, (W.I.R. Comforts Fund) Camp, Kingston	8 cases Cigarettes, equal 60,000	2nd W.I.R., B.E.F., East Africa
V. E. Manton, Kingston	1 case Cigars	Queen Mary's Naval Hospital, *Southend-on-Sea.*
do	1 case Guava Jelly (24 lbs.)	do
Jamaica Friend's Army of Production and Economy, per Miss White, Port Antonio	4 cases Guava Jelly (24 tins, equal 240 lbs.)	The Friend's Ambulance Unit, 8 Weymouth St., W.I.
St. Ann's Ladies Committee, per Mrs. Allwood, St. Ann's Bay	100 Hospital Bags	Lady Smith Dorrien, 21 Eaton Place London, S.W.
The Women of St. Elizabeth, per Mrs. Griffiths, Mandeville	100 Hospital Bags	do
Wesleyan Methodist Needlework Guild of Patriotic Helpers, per Mrs. M. C. Wallace, Sav-la-Mar	1 case containing 223 Garments, etc.	Q.M.N.G.
St. Faith's Guild, per Mrs. Smyth, Sav-la-Mar	1 case containing 116 Garments, etc.	do
Mrs. Briscoe, Montpelier	1 case containing 236 Garments, etc.	do
Ladies of St. Elizabeth, per Mrs. Farquharson, Black River	1 case containing 1,330 bandages, slings, etc.	Red Cross Society, 44 Pall Mall, London.
Girls of Wolmers' School, per Miss K. J. Howson, Kingston	1 case containing 104 Garments,	Clothing of Destitute Belgian Civilians' Fund.
Ladies' Working Association, per Mrs. Branch, Kingston	1 case containing 305 Garments, etc.	do
do	1 case containing 87 Garments, etc.	do
do	1 case containing 512 Pillows, Bandages, etc.	Red Cross Society, 44 Pall Mall, London.
do	1 case containing 88 Bandages, etc.	do
Mandeville Ladies' Association, per Mrs. Wynne, Mandeville	1 case containing 2,250 Bandages, Hospital Bags, etc.	Q.M.N.G.
Miss Gunter, North St., Kingston	1 case containing 4 packages sundry gifts	4 members 'Black Watch, on service in France.
Mrs. F. Saunders, 3 North St., Kingston	1 box playing cards	194th Co. A.S.C., 24th Div., Train B.E.F., France.
Hon. H. Cork, Port Antonio	1 bundle Walking Sticks (about 50)	British Red Cross Society.
J. E. Owen, Kingston	1 box Cotton (10 lbs.)	Blue Cross Society.

COMMENTS.

HALF YEARLY GENERAL MEETING.—Members and Branch members are asked to note that the next Half Yearly General Meeting will be held in Kingston as usual on Thursday, the 17th January, 1918. Any business for this meeting should be sent to us early in order that a proper agenda may be prepared and issued in good time. Notices have already been sent to Branch Societies.

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SEED RICE.—Please note that if seed rice is wanted it must be ordered at once. It is not obtainable at planting time (April to June), and those who propose to try a plot should order the seed now. It will be ready in December, and we must have some idea of the requirements soon or we cannot order satisfactorily.

It requires about twenty quarts of seed to sow a nursery that will plant out four acres, and the same if planting dry land rice direct in the field. The East Indians often sow 30 quarts of seed for every acre.

:o:

SEED POTATOES.—The 400 barrels of imported seed potatoes we sent out during November were very fresh and were not sprouted when sent out. We wrote in the October Journal (page 407) of various ways they could be forced to sprout. We were able to get most of ours sprouted by the third week of November, and the remainder had strong sheet sprouts by the first week of December. The quickest potatoes to sprout were those that were sunned three or four days and then put back in the barrels. There was, however, some waste through rot in this way, but not very much. Those spread out in a room and covered with trash did not sprout quite so quickly. The second consignment which has just arrived at the time of writing is 4/- a barrel dearer than the last lot, and we expect the lot to arrive in January will be still further increased in price.

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PLANTING COCONUTS.—Mr. Cradwick when visiting Portland after the hurricane, wrote us that at Darlingford, the property of Mr. H. Buckley, he noticed coconut trees that had not been blown over by the force of the wind, while others had been blown over, both plots being grown under the same conditions except that—as Mr. Buckley explained—those standing, had originally been planted in deep holes so that the roots were not above ground at all. It was noticeable that a large proportion of the coconut trees had broken off at the base, just at the ground level. This practice should prove suitable where the soil is porous and water would not lie in the holes, but it would not likely work on stiff soils except on slopes where a small trench could be dug to draw the water away. On the flat the water would be sure to collect and remain in the holes.

:o:

ANTHRAX.—This disease recurs sporadically in Jamaica. It fortunately has not become an epidemic.

The greatest precaution has to be taken that any cases of cattle or mules dying suddenly through no very obvious or clear cause, should be immediately reported to the nearest Police Station or the Director of Agriculture with a description of symptoms. Postage to the Director of Agriculture is free.

The carcasses of all animals should be burned or buried deep. It is careless, dangerous, and should be made criminal to leave any carcasses of animals to be eaten by John Crows and dogs.

The disease Black Leg is much more comomon than anthrax and is sometimes confused with it. The same precaution should be taken in both cases.

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BEEF—KILLING BREEDING STOCK.—The high price for beef is depleting the breeding stock of the world. Jamaica is no exception. In the United States this is more serious than anywhere else because the great packing houses which put up corned beef in barrels and in tins cannot refuse to take these beasts and are glad to get supplies. It would seem insane for stock breeders to send cows heavy in calf to the slaughter house, but from the great cattle ranges in the Far West of the United States, it is stated that at least 35 per cent of the cattle sent in lately were in calf and some only wanting a few weeks—or less—of calving and there is no Law or regulation to stop this.

The stock breeders do not care what happens in the future; they are bent on making plenty while the high prices last.

Dairy cows not up to a high standard, are being sent to the butcher also because first of the high price received, the difficulty of getting labour and the high price of foodstuffs.

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KEEPING CORN.—There was no Naphthalene to be had from September to December, and Bi-Sulphide of Carbon could not be sent out because of a scarcity of drums (it must be put up in air-tight steel drums)—besides this chemical is only for those with very large quantities of corn. How therefore could corn be kept free from weevils? By sunning it every week. This is not simple where large quantities are held, but it is cheaper than losing the corn. We have sunned 50 bushels of corn already attacked by weevils and let a flock of fowls and chickens go among it. Weevils thrive in dark; the light and sunshine and breeze made the weevils come out, the fowls and chickens simply gorged themselves with them and never ate a grain of corn. The secret of this is to call up the fowls and let them fill their crops full of attractive food first; if they have a crop full of soft food they will not look at corn but will go for the weevils.

Corn if kept close and air-tight all the time may become heated and fusty. Air the corn bins and turn over the corn between the sunnings.

Seed corn should be kept on the cob and these should be hung up in a cool airy place and examined occasionally for weevils. If attacked hang up the cobs in the sun and breeze for a day.

(Since writing the above we have secured a small lot of Napthalene and we are sending this out to those who were anxious to get a supply. SECRETARY.)

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HONEY.—Honey will be high in price again not only because it is a form of sweetening (and sugar is dear) but because it cannot be shipped from the ends of the earth to the great world centres, and the American crop is estimated only at 60% of normal, while there will be practically none in Europe.

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GUINEA CORN.—At the time of writing (beginning of December)

the native Guinea Corn is all heading and seed should be available from the middle of January. A good many have written us asking for seed now to plant, but this is not a good time. An early planting could be made between March and April and it could be cut down for fodder in June when it would grow up vigorously again and bear seed in January.

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CORN CROPS.—The August and September plantings in the lowlands have grown splendidly. We were glad to note that in Pedro Plains, once a great corn producing district, but where through droughts there has not been a good crop since 1906, corn was planted extensively this season and has borne splendidly. Corn was being taken in from the beginning of December. There will be supplies of new corn available in January

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BAT MANURE.—Mr. R. S. Biscoe of the Surveyor General's Office, addressed a letter to the press calling attention to the amount of rat bat manure contained in the numerous caves scattered all over Jamaica. He has a list of 50 of such caves.

This has been an old subject in this JOURNAL, but bat manure has been used only to a small extent so far. The very high price of artificial manure now, however—on which there is an import duty—makes it almost prohibitive to be used, so that if there ever was a time when we should seek out and apply all the resources of the Colony, to secure manure, it is now. Bat manure is rich in nitrogen and phosphates, but it contains practically no potash. Unfortunately, potash is the scarcest fertilizing product now-a-days, because nearly all the world's pre-war supplies came from the potash mines in Germany. The sea weed around our shores is rich in potash, and could be utilized by estates along the sea coast. Manure is always scarce here, no cultivator can ever get enough of it, and altogether less is used than in almost any country where agricultural practices have become well-defined and systematic. Our soils have, indeed, been wonderful. Branch Societies should discuss this subject and if there are any caves in any district containing bat manure, let us know. Proprietors of such caves should not stand in the way of the product being utilized at a reasonable price.

The deposits of bat manure vary very much and no one could say from their appearance that these may or may not have had a good deal of their fertilizing value washed or leached out. Many of the caves are in remote places transport from which might be expensive. According to pre-war values, those who tried bat manures did not find them give profitable returns. According to present values of food crops there is inducement to increase returns even by very little so that even the poorest class of bat manures are of value while the best of them are now worth getting out even from difficult corners. These deposits should be utilized.

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POTASH.—We can get along without potash in many of our soils. Germany thought it could starve out the United Kingdom through lack of potash, but farmers have got along without it. Phosphates have been found more vital and the United Kingdom has enough and Germany not enough. All our clay soils have plenty of potash which only want cultivation to make it available. This may be

done by liming, deep ploughing or forking and growing strong rooted leguminous crops which will utilize the potash in the rough and make it available for more tender crops thereafter.

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Motor Tractors.—The speedy and effective cultivation of fresh land has been made possible by the use of the most modern type of agricultural tractor. A type of light motor tractor is now being turned out in the United States in thousands a week and great quantities are being shipped to France and the United Kingdom. Motor car works are producing these or have reduced their output of motor cars to make tractors. These tractors can plough, harrow and cultivate several acres per day with one man in charge. They will yet become common in Jamaica, as they can be used in small fields which the usual large and powerful tractors cannot do.

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Rice.—Rice forms the third most important import into the Island, in value; our largest imports are of wheat flour and the next salt fish. On an average over the last five years we have imported about £90,000 value of rice. It is a popular, palatable and efficient food. As most of our imports came from India, it is possilble that we may receive no more supplies. We have lands, however, that can raise all that we need and these lands are now lying idle. Rice growing is becoming an important industry in Southern Westmoreland running into Hanover. The acreage under rice—which was probably onlp about 150 acres when the war broke out—has now increased to about 1,000 acres. It would require from 8,000 to 10,000 acres to produce enough to replace our imports. Ideal land for the purpose is available in one block in one district, viz., the Great Morass on the borders of Westmoreland and Hanover, which includes altogether about 25,000 acres of land, 5,000 acres of which are the property of the Government. All this land is suitable for rice growing without any elaborate and expensive preparation, such as might require to be incurred in some of the swamps in the Island. The land is never deep under water, and the water contained in it is not stagnant but moving. At the present high prices of foodstuffs there is substantial profit in raising rice. At half the present prices, there is still profit. A curious objection raised against rice growing here, is the loss of revenue that would ensue if there was no rice imported on which is imposed a $\frac{1}{6}$ duty of its value. We do not know how this could apply, under the present circumstances when there may be no rice imported at all. But surely an industry which would give profitable employment to many thousands and would save cash going out of the Island to the extent of £90,000 a year should be of more value to the Island than a sixth of this amount, imposed as a tax. Surely £90 000 circulated in the Island, most of which would go to purchase probably some other imported goods in the way of better clothing, luxuries in food, horses and buggies or travelling on the railway or by motor car—and it is to be hoped some lodged in the Bank—is of more value to the Island than a 16 2-3% duty.

We have made this number of the Journal largely a rice number in order to direct more attention to the vital necessity of producing more of this valuable food on the available lands now lying waste.

AGRICULTURAL SHOWS TO BE HELD.—

Nain (St. Elizabeth)	1st January, 1918.
New Roads (Westmoreland)	1st January, 1918.
Lambs River (Westmoreland)	1st April, 1918.

Clarendon Food Show at Chapelton, 4th April, 1918.

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DIARIES.—Everyone should get into the diary keeping habit. Most of the largest planters keep proper records but very few Small Settlers do so. The diary can not only serve the purpose of a record of the events in the holding but can also serve as a rough cash book. It is best to get a diary with not more than two days to the page.

The following are some of the items that should be entered:—

WEATHER:—Whether it has rained, and if so how much rain. Where no rain gauge is handy, remarks might be entered as, heavy rain for two hours, or slight showers etc.

Records of planting of all crops should be entered with the amount of seed used.

The crops reaped and the quantity reaped should also be noted.

Where a regular set of books is not kept all amounts paid out and received can be also entered in the diary.

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BRANCH NOTES.

THORNTON (St. Thomas.)—A special meeting of this Branch was held in the Schoolroom on Thursday, 1st November. Prizes were given to those who had won them in the recent ground competition; and seeds for planting were distributed by Mr. Cradwick. JAS. BROWN, Secretary.

SOMERTON (St. James.)—The regular monthly meeting of this Branch was held on 5th November, 1917. The President. Mr. Rennie, the Agricultural Instructor, and 15 members. The minutes of the last meeting were read and confirmed. The Penny Bank was started on the 8th ultimo. Mr. J. A. Clarke was elected as Secretary and general manager in place of Mr. W. Robotham, who has left the district. Messrs. Kenneth Hewan and Thomas Hemming were elected as auditors of the Penny Bank. Mr. David Hewan suggested that the books be audited every quarter instead of half yearly. This was unanimously agreed to. The Petition re the awful state of the Somerton roads was dealt with. Mr. Rennie spoke on the necessity for planting food crops largely, especially corn and sweet potatoes. After other encouraging remarks, Mr. Rennie asked to be excused from the meeting as he had to attend another meetnig at Good Will. After the singing of the National Anthem, the meeting came to a close.

C. T. GOHAGEN, Secretary.

MALDON (St. James.)—This Branch held its monthly meeting on the 9th November. The Rev. R. J. Chambers (President) Presided. The following agenda was gone through:—(1) Correspondence was read and dealt with. (2) Cabbage seeds obtained from the Parent Society were distributed among those who desired them. (3) The question of the Corn Growing Competition was gone into. Eight members have entered the competition. A committee will be formed next meeting to judge the results. (4) 'Grindstone. No news of grindstone is heard beyond the fact that the amount was lodged with the purchaser. (5) An article in the October Journal *re* economy was read by Mr. D. I. March, and provided a healthy and interesting discussion. (6) Authorized Persons. The name of W. L. Wright is cancelled from the list of Authorized Persons. An appointment to fill the vacancy will be made at next meeting. Mr. B. Jackson is nominated to assist in the Brown's Town Districts; those present gave no report. After the roll call the meeting closed with the National Anthem. J. T. MORRISON, Rept. Secretary.

HOPEWELL (Hanover.)—The regular bi-monthly meeting of this Branch was held on November 2nd. There were present, E. E. Melville, Esq., President; R. C

Somerville, Agricultural Instructor; W. Holland Rigg, Secretary and 27 other members. The minutes of previous meeting were read and confirmed. Correspondence was also read and dealt with. The Instructor explained to the meeting that the reason for Mr. Charlie's cane buying scheme not being carried out was that he had not been able to obtain the use of the Tryall works. The appointment of 5 Authorized Persons for this district was reported and 3 others were nominated. The Treasurer presented a statement of cash in hand towards buying a new mill and as this was insufficient the President proposed that this matter be left over until the next meeting when perhaps we would hear from Mr. Barclay *re* the arrival of mills which were expected. The President explained how the Potato Growing Competition was to be carried out, and the Instructor promised that he would inspect each competition plot to see that all competitors complied with the rules. The following gentlemen gave donation to purchasing potatoes: Messrs. Kerr and Co., £1; Messrs. Sanftleben, 10/6; Mr. Shekel, 2/-;—total, £1 12/6. The Secretary was instructed to write thanking these gentlemen for their liberal subscription. The Instructor here explained thoroughly how potatoes were to be planted. After lengthy discussions *re* the formation of a Corn Club and also *re* vegetable seeds, the meeting was brought to a close by the singing of the National Anthem.

W. HOLLAND RIGG, Secretary.

HANOVER.—The fourth quarterly meeting of this Branch was held November 11 members and the Instructor, R. C. Somerville. The minutes of the last meeting were read and confirmed. The Instructor reported that the Dalmally Sub-branch had arranged to fall in with the suggestion of the Parent Society as to commencing their financial year on April 1st. Correspondence from the Jamaica Agricultural Society was read, and various items noted. Three members spoke on the prevelancy of praedial larceny in their districts. Three new Authorized Persons were nominated. Mr. Webster brought up the need of a J.P. for the Cascade District, and the Secretary was instructed to see the Custos on the matter. The Secretary reported that the result of the Show shewed a profit of 4/4. A resolution congratulating Mr. E. E. Melville on his election to membership was unanimously carried. The Instructor gave a very interesting lecture on Gardening. The lecturer was heartily thanked for his remarks. T. J. LLOYD, Secretary.

GREEN ISLAND (Hanover.)—The regular monthly meeting of this Branch was held on 20th November. Present, the President, Vice-Presidents, Secretary, Instructor and twenty-four members. Minutes of last meeting were read and confirmed. The Instructor spoke at length on the prevalence of Praedial Larcney in the districts around, and moved that a strongly worded resolution be sent to the Parent Society to be forwarded to the Government, praying that the laws passed against praedial larceny be put in force as this great evil in our midst is daily on the increase much to the discouragement of the industrious cultivator and the causing of greater distress in the district. Mr. Fred White of Logwood said that during the week over 50 hills of yams were stolen from his field and Mr. Shaw of Salt Spring said he was also a great sufferer. Reports of work done by Authorized Persons who presented. Meeting closed in the usual way. T. C. THOMPSON, Secretary.

PORT ANTONIO, (Portland.) The regular monthly meeting of the Port Antonio District Branch Agricultural Society was held on 24th November. There were present, the President, in the Chair, and a large attendance of members. The minutes of the last meeting were read and confirmed, and matters arising therefrom dealt with. Mr. Ffrench, Chairman of the Loan Bank, addressed the meeting on 'Co-operation and Loan Banks.' *A statement of accounts of the Society was given by* the Treasurer. Mr. J. Shelton made the suggestion that a meeting in connection with the Branch be held at Fellowship as men there are anxious to join. He was told to make arrangements and inform the Secretary. Capt. J. H. Bennett gave as his experience that people are willing to leave land uncultivated at their door and go a five hours' journey every day to some distant place, when those hours wasted on the journey to and from could be spent profitably at home on available land. The next meeting was fixed for the 29th of December. The meeting closed after the singing of the National Anthem. W. R. ROBOTHAM, Secretary.

FAIRY HILL (Portland.)—The monthly meeting of this Branch was held on 15th November. There were fourteen members present including officers. The minutes of last meeting were read and confirmed, and matters arising therefrom dealt with. Correspondence was also read and discussed. The President spoke of the destruction of crops by the hurricane; in his opinion the output for next year would be 80 per cent of this year's crop. This was due to increased planting. The

distribution of seeds was next dealt with. The President gave some hints on the cultivation of these and mentioned rats as a serious menace at this time of the year The Vice-President then said that grated cocoanuts mixed with salt-phisic is a very effective poison. Four members paid their subscriptions and the meeting adjourned.

F. H. HARRISON, Secretary.

PORT MORANT (St. Thomas.)—A meeting of this Branch took place on 30th October, 1917. Present: E. Croskill, President, in the Chair; R. Geo. Ramsay, 1st Vice-President; W. M. Robertson, Treasurer; R. R. Sqares, Secretary; 10 other members and Messrs. Wm. Cradwick and Leo Wates, Instructors. The President having called the meeting to order, the Secretary read several matters in connection with the formation of the Branch, and minutes of various minor meetings. Mr. Wates then delivered a stirring address and impressed on all present the importance of co-operation and attendance at meetings. Mr. Cradwick followed with a rousing speech in which he proved the value of the Agricultural Societies in Jamaica—the friend of the people, and urged every cultivator to join a Branch to their interest. He advocated the formation of a Loan Bank in connection with this Branch, but reminded those present that borrowers must be prepared to pay back the loan which is to be used only for agricultural purposes. Five new members were enrolled. Meeting then closed. Next meeting on the 19th November, 1917, at 4 p.m.

ROD. R. SOARES, Secretary.

SOMERSET (St. Thomas.)—The regular monthly meeting of this Branch was held on the 13th November, 1917. Mr. M. S. Ross presided in the absence of the President and Vice-President. Thirty-two members and the Secretary were present. Minutes of previous meeting were read and confirmed, and matters arising therefrom dealt with. Correspondence from the Parent Society and Mr. Hanson, were read and discussed. Hurricane seeds were distributed. All recipients subscribed for the cartage. Members expressed their gratitude for same, and instructed the Secretary to write and thank the staff of the Agricultural Society for the allocation. Many other minor matters were dealt with, and the meeting terminated.

JAS. A. TELFER, Secretary.

ARCADIA (St. Thomas.)—At a regular meeting held on November 19, there were present-: Messrs. Joseph Haynes, V.P., in the Chair; James Grant, 3rd V.P.; Melmoth Grey, Treasurer; 8 members, Mrs. M. A. Grey, Assistant Secretary, Saml. A. Vassall, Secretary, and a visitor, who afterwards was elected a member as well as two others. The hurricane relief seeds were distributed by the Secretary, the Assistant Secretary and the Treasurer, on Wednesday, November 14, 1917, as the roads were in too bad a state for Messrs. Wates and Cradwick to come and do so. There was much appreciation expressed by members and others for the gift and a vote of thanks was moved to Messrs. Wates and Cradwick for the zea in putting the matter through, and also to the Parent Society for the gift. After dealing with sundry minor matters, the singing of the National Anthem brought the meeting to a close.

SAML. A. VASSALL, Secretary.

BROWN'S TOWN (St. Ann.)—At the meeting of this Branch held on October 5th, a hearty welcome was accorded to Mr. Cradwick, who takes the place of Mr. Arnett. The minutes of the last meeting were read and confirmed. Arising out of the minutes there was a discussions the land question. Several speakers alluded to the impossibility of getting land either to rent or to buy, and said that this largely accounted for the exodus of young men from this district. Everyone was of opinion that land to *buy* and not for rent is what is needed. On the suggestion of the lecturer, it was decided to form a committee to deal with the matter, and two resolutions on this subject were passed. At the close of the meeting, 17 new members were elected.

REV. A. GROVES WOOD, Secretary

GIBRALTAR (St. Ann.)—A meeting of the above-named Branch was held on November 29. There were present the Rev. J. Thrift, President, in the Chair, and nine members. The minutes of last meeting were read and confirmed. Matters arising out of the minutes were dealt with briefly. Matters of interest were discussed. The agenda for next meeting was fixed:—(a) Discussion on "Yam Competition" by Mr. W. McFarlane, and (b) "How can the district be uplifted from an agricultural standpoint" by Mr. R. S. Barnett. The singing of the National Anthem brought the meeting to a close.

C. S. EDWARDS, Secretary.

WARSOP (Trelawny.)—This Branch held its monthly meeting on November 7th. In the absence of the President, the V.P. took the Chair. After the preliminaries, the minutes were read and confirmed. A letter from the Secretary of the Parent Society *re* supply of seed potatoes was read. An article *re* Authorized Persons was read from the Journal by Mr. J. Murray. Mr. S. McNeish read one dealing with goat stealing. These gentlemen were given a hearty vote of thanks. At this stage the Instructor advised the members not to sell their goats indiscriminately, because by so doing they will, in the end, have cause to regret it. He appealed strongly to the members to increase their efforts in the production of food stuffs. The growing of sweet potatoes and corn were particularly dealt with. It was decided to convene a meeting during the coming month to improve on the people the great need for greater efforts to meet the food situation which is daily growing a serious one. After fixing the agenda for the next meeting this meeting was concluded by the singing *of the National Anthem.* U. K. WALTERS, *Secretary.*

WALDENSIA (Trelawny.)—The regular monthly meeting of this Branch was held on the 9th inst, when eight members and the President were present. After the confirmation of the minutes of the last meeting and reading of correspondence, the Chairman of the Managing Committee gave his report on the Society's new corn mill. The rules governing the keeping and proper working of the mill were presented by the Secretary, and the meeting agreed that the members should go and try its grinding quality before passing it over to the keeper. The Chairman asked if any application from this Branch had been made to the General Secretary for Irish seed potatoes and other seeds, and was told no. He then pointed out the necessity for doing so. A few members gave their experience of the failure of the native seed potatoes, followed by a discussion on the subject. The Chairman at the close of the discussion advised the members to enter the competition. Instruction was given to the Secretary to write out a copy of the rules for the keeping and working of the mill for its keeper. The meeting then adjourned. N. A. LIVINGSTON, Secretary.

WAKEFIELD (Trelawny.)—The regular monthly meeting of this Branch was held on the 30th October. Present: Mr. M. Rennie, Instructor; the President, Secretary, all the other officers, 30 members and a goodly number of visitors. Minutes of last meeting were read and confirmed. There was a lengthy discussion *re* the starting of a new Penny Bank, and various officers were elected. The Instructor spoke highly of the benefits of a well-managed Penny Bank and commended the Society for such a wise move. The Instructor next addressed the meeting on the seriousness of the food situation caused by the effects of the war and urged the planting of quick crops such as the sweet potato. He showed how the potato disease might be escaped by rejecting local plants and by selecting fresh cuttings from districts that are free from the said or similar diseases. A complaint rose that land for cultivation was unprocurable by many willing planters. The Instructor investigated the matter thoroughly, and advised them as to the necessary steps to be taken under such circumstances. The singing of the National Anthem brought the meeting to a close. S. E. PATTERSON, Secretary

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DUNCANS (Trelawny.)—The usual monthly meeting of the Branch Society was held on the 28th November. Mr. R. A. Hammond in the Chair. There were 10 members besides 2 visitors present. Arising out of the minutes, the matter of the Kettering tank was discussed. The owners are not now willing to give the tank to be repaired for the public's use, but further endeavour will be made to get them to acquiesce. Mr. Rennie (Instructor) wrote to say that the potatoes for the competition would be 36/- and not 20/- as at first supposed. Upon this some members withdrew from the competition. The Authorized Persons presented their reports.
L. L. LOCKE, Secretary.

MT. REGALE (St. Mary.)—The monthly meeting of this Branch was held on November 3rd. Fourteen members and the two assistant Instructors, Messrs. Banks and Jones were present. The Authorized Persons complained about the difficulties in handling prisoners as they are without handcuffs. It was decided that the Inspector General be asked for permission to use ropes on these prisoners. The Authorized Persons reported on work done. Mr. Banks in addressing the house, referred to the good work of the Agricultural Society; the interest taken by the Governor, and the great sufferniġg of the people of Portland through the late storm. On behalf of Mr. Cradwick, he asked for help for these people in the form of yam heads. As a means of successful cocoa growing he advised the formation of pruning clubs. Mr. Jones dealt chiefly with the method of preparation of the soil and growth

of Irish potatoes, bringing out some very important points. With the singing of the National Anthem meeting adjourned to the second Friday in December.

B. THOS. ATKINSON, Secretary.

WINDSOR CASTLE (St. Mary.)—This Branch met 6th November.. Present: Chairman, St. J. Crooks, Esq ; Mr. H. A. White, Secretary, and 21 other members besides a few visitors. Minutes of last meeting read and adopted. Mr. Theophilus Dixon was elected as a new member, and nominated as an Authorized Person. The Authorized Persons presented their reports. Letters received from the (a) Parent Society; (b) Instructor, were read and dealt with. It was agreed, that members came prepared to the next meeting, with a subject for discussion, and that a list of Authorized Persons be kept by Secretary. Date for the next meeting was fixed, and members dispersed after the singing of the National Anthem.

H. A. WHITE, Secretary.

ENFIELD (St. Mary.)—The regular monthly meeting of this Branch was held on November 21st. There were present: The President, Rev. W. S. Taylor; J. H. Gillespie, Secretary; J. M. Byfield, T. R. Beckford Vice-Presidents; six members and a visitor. There was nothing for discussion arising from the minutes, which were read and confirmed. The President discussed the subject of "The present irregularities of the despatching and receiving of mails from and to Enfield." The next subject for discussion was the growth of Irish potatoes. The President and members agreed to procure a barrel for sale to other members and also agreed to instruct them *re* the proper cultivation of this crop. Much was said *re* bad roads and impassable unbridged rivers, and a resolution is to be drafted dealing with the matter, to be sent to the proper authorities. Correspondence was read and dealt with, and the meeting adjourned. J. H. GILLESPIE, Secretary.

JACKSON (St Mary.)—This Branch held its meeting on November 2nd. Present: C. D. Ramsay, President; A. E. Leo Giscombe, Secretary, and 4 members. Minutes of last meeting were read and confirmed. Matters arising from the minutes were dealt with. Reports of Authorized Persons were presented. Vegetable seeds and were discussed, and it was resolved that sufficient cabbage seeds be ordered to make up 50 packets while a sufficient quantity be got of turnip seeds for 25 packets. Hurricane relief were lengthily discussed Secretary was instructed to write for more copies of four different pamphlets sent from the Parent Society *re* growing of crops. Correspondence was read and dealt with. Minor matters were discussed and the meeting adjourned till the 30th instant, after the singing of the National Anthem.

A. E. LEO GISCOMBE, Secretary.

CRAIGTON (St. Andrew.)—A meeting of the Craigton Branch was held on November 28. There were present, the Instructor, Treasurer, Secretary and eleven members. In the absence of the President and Vice-President, Mr. W. H. Hanson was voted to the Chair. Minutes of the previous meeting were read and confirmed. Arising out of the minutes the Secretary reported that she had made the necessary application for affiliation with the Parent Society, and submitted receipt from Mr. Barclay, acknowledging affiliation fee. The rules for the guidance of the Branch were submitted by the Committee appointed for the formation of same, and adopted. A lengthy discussion ensued *re* the purchase of a corn mill. It was at length unanimously agreed that a subscription list be opened for the purchase of same, and that Treasurer report at our next monthly meeting as to its progress. The Rev. S. T. A. Jones having formally resigned his position as President of the Branch, Mr. J. M. Whitely was unanimously appointed President. Mr. Whitely accepted the position and promised to do all he could for the improvement of the Branch. The Instructor, Mr. A. P. Hanson, spoke *re* distribution of the seeds supplied by the Parent Society, and encouraged the members to plant again and to keep an account of their yield from the seeds distributed so as to be able to report thereon. It was unanimously agreed that the thanks of the Branch Society be conveyed to the Government through the Parent Society for the consignment of seeds received in consequence of the recent hurricane. (Miss) E. D. PALMER, Secretary.

CAMBRIDGE-WOODFORD (St. Andrew.)—At a special meeting of this Branch held on the 12 the November, there were present, the President, Rev. S. T. A. Jones; the Secretary, eight other members and some visitors. The minutes of August meeting were read and confirmed. The Secretary stated that he was advised by Mr. Barclay that a corn mill could not now be had for two Pounds, but that one could be got for two pounds ten shillings; and that with the approval of the President

he had forwarded an additional ten shillings making a total of two pounds ten shillings. The receipts were presented. Other correspondence was read and dealt with. Ar-Arrangements were made for the distribution of hurricane relief seeds to members and other deserving cultivators. Two new members were elected.

R. A. CLARE, Secretary

ST. ANDREW (Central.)—The regular monthly meeting of this Branch was held on 21st November. Those present were: Messrs. G. W. Byrnes (President) in the Chair; R. K. Smith (V.!P.); R. A. Gordon (Secretary); A. P. Hanson (Instructor and 6 members. The minutes of the last meeting were read and confirmed. Many matters of great importance were dealt with, including the purchase of a substantial corn mill for the Branch, the appointment of a new Authorized Person in place of Mr. R. Malabre, and the adjustment of the finances of the Branch. A vote of thanks was next accorded to the Instructor for the interest displayed by him in securing some valuable and expensive seeds for the members of the Branch through the medium of the Parent Society. In his reply he impressed forcibly the necessity of early planting in order to preserve their vitality in order to obtain the maximum amount of increase. He also dwelt on the necessity of extensive planting. The following resolution was then unanimously carried:—Resolved that the thanks of the members of this Branch Society be conveyed by the Parent Society to the Government for promptly coming to the assistance with a gift of seeds, the need of which was keenly felt by the cultivators. The meeting adjourned after the singing of the National Anthem.

R. A. GORDON, Secretary.

PROSPECT (Clarendon.)—The monthly meeting of this Branch was held in the schoolroom here on Monday, November 12, 1917. There were present, the Instructor, three visitors, the Secretary and six members. After the reading and confirmation of the minutes, matters arising out of them were dealt with The Instructor then gave a very helpful and instructive lecture on Mulching and Manuring. After this he urged upon the Society the necessity for greater activity in the production of foodstuffs especially yams, potatoes, corn and peas. He also encouraged members to start preparing for the proposed show in April of next year. He next brought to the attention of members the making of cocoanut butter and the advisability of it. He was accorded a hearty vote of thanks. The Instructor was asked to give a lecture on the cultivation of vegetables bringing in preparation of seed boxes and seedlings for planting. The meeting then adjourned with the singing of the National Anthem.

F. R. RICKETTS, Secretary.

FRIENDSHIP (Westmoreland.)—The regular meeting of this Branch was held on 12th November. Present: Rev. I. A. Dell, V.P., in the Chair; R. C. Somerville, Esq., Instructor; the Secretary and 21 other members. After the reading and confirmation of the minutes several matters arising from them were dealt with. Mr. Samuels one of the Authorized Persons, was informed that another badge will be supplied him, the one he had having got lost while making an arrest. The Instructor informed the Society that Mr. Ritchie, Government Entomologist, could not arrange for a lecture to the Society because of the inclemency of the weather, but that whenever it was possible the members will be duly notified. Then followed a discussion on the increase of praedial larceny and the formation of a Vigilance Committee, and a resolution on the best methods of dealing with it, passed. The members of the Society have decided to cultivate Irish potatoes. These will be supplied to order by the Vice-President. The Labour Question was also discussed The Instructor gave a very instructive lecture on the cultivation and curing of Irish potatoes. The Vice-President informed the members that vegetable seeds written for will soon be to hand for distribution. After dealing with a few minor matters the meeting closed with the singing of the National Anthem.

R. H. COKE, Secretary.

SPANISH TOWN (St. Catherine.)—A regular meeting was held on the 7th November. Present: The President; Vice-President, the Treasurer, the Secretary and several members. Correspondence was read and discussed. After dealing with sundry matters, the meeting adourned.

EVERARD LOPEZ. Secretary.

PORUS (Manchester.)—The regular monthly meeting of this Branch was held on November 5th. 1917. Present: S. A Hendriks, Esq., President; Rev. and Hon. W. B. Esson and Mr. W. A. Morgan, Vice-Presidents; the Secretary and eleven other members and some visitors. The minutes of the previous meeting were read

and confirmed, and matters arising therefrom dealt with. Correspondence was also read and dealt with. The Secretary was instructed to write Mr. Barclay asking him the different varieties of potato slips that he can supply, and the weight of a bundle. The protection of the Authorized Person was next discussed. It was pointed out that the St. Vincent yam was dying out. Mr. W. A. Morgan said if the growers handle their yam heads carelessly it will die out altogether. It was suggested by Rev. Eason and agreed to, that at our next meeting Mr. W. A. Morgan give a lecture on the cultivation of the St. Vincent yam; the President will also give a lecture on the cultivation of the Barbados yam and a demonstration. Reports by Authorized Persons on their work were presented. The meeting then adjourned to the first Monday in December. C. ROWLAND, Secretary.

Notes from the following Branches have also been received:—Albion Mountains. Epsom (St. Mary); St. John's, Upper (St. Catherine); Whitehall, Wilmington (St. Thomas); Gordon Town (St. Andrew); Bangor Bidge, Belvedere (Portland).

CO-OPERATION.

We call attention to a fine instance of the success of practical co-operation in buying and selling, among very poor people in a remote and isolated village in isolated Western Donegal Ireland. which is published in the Christmas Number of the Jamaica *Times*. Every one interested in co-operation should read this article.—

HOUSEHOLD HINTS,

CORN BREAD:—Now that wheat flower is so scarce. we must turn to our own home grown corn meal. There is a recipe for Corn Bread

2 Cupfuls Native Corn Meal
1 .. Flour
1 Teaspoonful Sugar
1 ,, Salt
3/4 .. Baking Powder
Juice of 1 whole lime or seville orange
2 3 Cupfuls water
Sift and mix dry ingredients. Then add water and last of all lime juice.
Bakes in 30 to 40 minutes.
Sour milk improves the loaf.

RABBITS.—Should be a cheap and certainly are a nutritious form of meat stuff. They should be bred largely and used freely. Here are a few good recipes dealing with the preparation for the table.

When purchasing a rabbit see that the claws are smooth, sharp and pointed, and the small nut under the paw well developed Should the claws be rounded and rough the ears tough and dry, and the nut under the paw conspicuous by its absence, the rabbit is old and not suitable for boiling, baking, or stewing, though it would do very well for soup

A rabbit should be paunched as soon as possible after being killed Make a slit underneath, and carfully remove the stomach and all the intestines. The rabbit should then be well wiped inside and hung up.

SKINNING A RABBIT.—First cut off the ears, and chop off the legs at the first joint. Then begin loosening the skin at the sides of the opening, and draw it away from the flesh towards the hindlegs. Turn the skin off the body and towards the shoulders and skin the forelegs in the sameway Remove the skin from the head very carefully, using the point of a sharp knife, and take out the eyes. Now remove the kidneys, and draw away all the fat that surrounds them, break the thin skin which separates the chest from the lower part of body, and draw out the heart and lungs. The liver, heart and kidneys are the only inside parts that should be kept, and the gall must always be carefully removed from the liver. Wash the rabbit well in salt and water, and allow to soak for an hour in tepid water to which a little salt has been added. Then lift out, dry thoroughly with a clean towel, when it is ready for use.

...AL COLLEGE AND RESEARCH